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ABSTRACT

Supporting general recommendations of the main body of the study contained in SO 005 889, this report suggests ways of approaching a reconceptualization of knowledge utilization in education at the policy making level. Since education is viewed as a life long process, there is need to establish and maintain a mass media system (especially television broadcasting in its commercial and noncommercial forms) that utilizes in the development of its programs the kinds of knowledge that are crucial for the survival of society as a whole. Dangers of a technological bias may hinder rather than advance the cause of education if there is not a concern for individual human development and recognition of the potential needs of all members of society. It is recommended that the U.S. Office of Education consider questions of mass communication development, use and regulation as integral parts of the larger question of equal access to and opportunity for equal education. Nine sections are provided on The Historical Framework, Current European Developments, Mass Media and Education, The Educational Nature of TV, Political Control of TV, the Underlying Philosophy, Improving the System, Suggestions for Further Studies, and Notes and References. Appendices include a discussion paper on the British Utilization of Educational Television by John L. Huffman and a working bibliography. For related documents see SO 005 889. (Author/SJM)

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SPECIAL INVESTIGATION 1:

Knowledge Utilization in a Democratic Society:

Education Through Commercial Television

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Prepared with assistance from U.S. Office of Education
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Center for the Advanced Study of Communication
The University of Iowa
1 August 1972

SPECIAL INVESTIGATION 1:

Knowledge Utilization in a Democratic Society: Education Through Commercial Television

The following special investigation supports the general recommendations of the main body of the study and suggests ways of approaching a reconceptualization of knowledge utilization in education at the policy-making level.

In particular, since education is viewed as a lifelong process that involves not only children, adolescents and their teachers but all of society, it must be society's business to establish and maintain a mass media system (and especially television broadcasting in its commercial and non-commercial forms) that utilizes the kinds of knowledge in the development of its programs that are crucial for the survival of society as a whole.

In line with the general recommendations the special investigation further suggests that the dangers of a technological bias may hinder rather than advance the cause of education, if a concern for human development is replaced by an emphasis upon technological training. As long as the relevancy of certain types of knowledge and their applications is determined by an educational system that is built upon elitist concepts, the majority of the population will be silent, indeed, left out, isolated and disinterested. Only a continuing concern for the mental well-being of the individual and a recognition of the potential intellectual needs of all members of society could bring about a shift in the thinking

about education and knowledge utilization. In this case, the educational system is the social environment of the individual who is also given the freedom to determine the relevancy of knowledge and its application to his particular professional or private interests throughout his life. As a result, teachers, schools and other channels of communication (particularly mass media) will take on different meanings and purposes in society.

The special investigation also suggests that under the first amendment provision of the U.S. Constitution the utilizer of knowledge, as a teacher and learner under a democratic system of government, should participate in a mass media system that provides equal access and opportunity for individual development as basic rights. This interpretation strengthens the position of the individual and forces mass media owners to consider their rights and responsibilities in a new scheme of participatory mass communication.

Finally, the special investigation supports the recommendation that the U.S. Office of Education should consider questions of mass communication development, use and regulation (in the case of radio and television broadcasting) as integral parts of the larger question of improving the chances for all members of society to gain access to sources of knowledge and to participate in education as a lifelong experience through the availability of a diversified mass communication system.

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The Historical Framework

Many problems of modern civilization can be traced to the impact of science and technology upon the socio-economic structure of societies. An understanding of the ideological climate in the social environment rests upon the acknowledgement of science as the ratio essendi of the contemporary world. Through the activities of educational institutions and their reinforcement by the mass communication media, the philosophical effect of science on questions of social control in Western democracies has led to a technological bias that is changing the nature of the democratic process, which stresses individual freedom and participation in society. In particular, the mass communication phenomenon of recent years may indicate a new philosophy of permanent change that is accompanied by a general loss of the sense of time and the discovery that life is little more than a series of "discontinuous moments of experience."[1] The result is a human crisis of extraordinary proportions in which man's belief in the permanence of social institutions is challenged and destroyed.

This paper will consist of some observations about education, mass communication and democracy in the context of the continuing industrialization and urbanization of Western societies, where old assumptions about the survival of culture are tested by new structures of social control. Flanked and outranked by her children, the United States and the Soviet Union, Western Europe may provide

the testing ground for the new ideologies of technological advancement and their effects upon the institutions of social control.

Education in Western sccieties has always been linked to problems of communication. In a sense, education could be defined in terms of a communication process, consisting of a sharing of knowledge of and about an individual's community and his participation in a way of life that emphasizes the idea of man as an inquirer and a contributor to his society.[2] The more recent literature about ideological, cultural or economic crises in education also focuses on communication, popularly expressed as a need for improved human relations or for better understanding of individuals and their role in society. In earlier times verbal skills and the mastery of literature, for instance, were expressions of similar concerns. The values that were placed upon communication by educational theories stressed the importance of man's knowledge of man and promoted the study of history, classical literature, languages and moral philosophy.

Although educational philosophies have changed over time, the education of the young has always been considered a major social task. Earlier educators argued for the protection of the young mind against external influences and disruptions of the school effort during the years of the student's formatio. Later theorists favored a confrontation of students with the complexity and difficulty of contemporary life throughout the period of formal education. At all times society has recognized the importance of education for societal growth and stability and has formulated

specific social and political programmes to direct the educational enterprise as an important institution of social control. In Durkheim's words, education is the "action exercised by the older generations upon those who are not yet ready for social life."[3]

Organized and regulated as a public activity since the 17th century, education became and still remains a legitimate problem of society that could and can be dealt with more effectively and efficiently in an institution setting rather than in the home. The separation of the child from his family for purposes of getting an education increased the opportunities for successful control of content and context of secular and religious education. In addition, the burden of responsibility for an education was moved from the family to the larger social group which created and enforced laws that reflected the values of education as a public responsibility.

Within this structure the educational institutions of Western Europe have reflected the values of the middle classes. Under their social and political rule, education became the yardstick for success, discriminating between privileged students, whose schooling in lycée, grammar school, Gymnasium and university prepared them for leadership positions in government, business and industry, and the majority of the people, whose primary education was aimed to equip them, through the reinforcement of cultural and religious values and the confirmation of political and economic alliances, for the responsibilities of a second-class citizenship. The goals of education were identical with the goals of political and economic

groups in society which made the expression of individual interests undesirable or even impossible.

Problems of education arise because of inconsistencies or inadequacies in the social order; they are affected by the change of the socio-economic structure in society, and their solutions reflect the moral and political values of the time. Thus, the rise of science and technology has brought about changes in the concept of education as a social institution. The face-to-face relationship of student and teacher during the early stages of history, when individuals learned by listening and questioning and when memorizing was regarded as more important than the learning of letters and the spelling of words, was drastically changed by the print age, when written records and books replaced individuals as teachers, when knowledge was stored in type, and when man gained the freedom to read and write, thereby extending--but also transforming--the dialogical relationship between teacher and student. These technological changes converted questions of environmental control from those of territorial domination and physical expansion to those of control over the dissemination of ideas and information, and resulted in the adoption of the communication technology for educational purposes by the spiritual and secular powers of Western Europe. By acquiring print technology, the ruling elites maintained their control over the masses during the next periods of social and political change that led to the age of democracy. With the beginnings of the industrial revolution and the urbanization of Western Europe, a new class of rulers emerged from the ruins of feudalism

and despotic rule. These were manager elites, whose economic and political values were eventually reflected in the educational systems that laid the groundwork for the evolving technocracy of Western Europe.

Technology in modern society is a process not unlike democracy, for it affects all humans and their conditions, but, unlike democracy, it promotes the separation of individuals from any control over their social and political environment. Furthermore, the economic and social changes of recent years suggest that technology has developed into a modern-day philosophy of progress that replaces the notions of democracy and democratic principles and affects the workings of society.[4] Mass communication media as instruments of technology, specifically in the context of contemporary educational ideologies and definitions of democracy, help propagandize the values of technological progress. By doing so, technology as a modern-day philosophy has changed conceptions of education and democracy. One of the results is the growing emphasis upon training as opposed to education, for training provides the educational system with the specific, vocational orientation that takes advantage of the increasing feeling of inadequacy or incompetence. The training for particular tasks was the answer to an acceleration of knowledge production in modern history; the result was an increasing amount of new knowledge but little, if any, guidance or interpretation of the use of knowledge. John Dewey described this dilemma 75 years ago when he wrote that "With the advent of democracy and modern industrial conditions,

"it is impossible to foretell definitely just what civilization will be twenty years from now. Hence it is impossible to prepare the child for any precise set of conditions."[5]

In establishing a difference between training and education, we stress the importance of conceptualizing education in terms of a theory of man as an inquirer and as an interpreter of knowledge, not only for his own particular needs and desires, but also for the construction of relationships between himself and others in his social environment which will lead t an active participation in society. Robert M. Hutchins refers to this preparation as liberal education, which he says must "lay the foundation for wise citizenship, the sensible use of leisure, and the continuous development of the highest powers of every human being. It must be the kind of education that will bind men together, not merely in this country but throughout the world; for a world order is emerging."[6]

Culture, leisure and the pursuit of academic studies once associated with the elite have now become the concern of large numbers of people in Western Europe; however, the democratization of the educational systems has been only partly successful. While <u>opportunities</u> for education have undoubtedly increased, actual sustained participation in the educational experience by members of all social classes has remained a real problem. It is clearly not enough to provide new changes in education without providing for changes in personal habits and attitudes towards education.

As Lewis Mumford observes, "new ideas do not take possession of a society by mere literary dissemination . . . to be socially operative, ideas must be incorporated in institutions and laws . . . ." [7]

In summary, the distinctions between training and education reflect underlying philosophies of society that range from prescriptive molds of social activity based on training to descriptive methods of social contribution based upon education. The stability of a democratic system depends upon the protection of the latter alternative.

Current European Developments

Although cooperation and coordination of the educational effort in Western Europe exist to some extent, linguistic and cultural differences and the forces of nationalism or regionalism should not be ignored or underestimated in any discussion of joint educational strategies among the countries of Western Europe.

The development of educational policies and the establishment of educational institutions that may help bring about a genuinely international design for education are closely connected with the economic and political realities in Europe. Specifically, educational goals can be realized only within the framework of actual economic and political cooperation among European nations. However, the activities of the Council of Europe, the Council for Cultural Cooperation and the Organization for Economic Cooperation and Development (OECD), for instance, not only provide examples of cooperation but also indicate the priorities for the training of

highly qualified individuals needed for the expansion of the scientific and technological realm of a unified community of nations. A significant increase of technological training at the expense of the traditional humanistic education of earlier years occurred during the immediate post-World War II era. Recently, however, attempts have been made to retain the qualities of a broad liberal education in an educational program with a technological emphasis.

The general educational reform movements in Western Europe were aided by a number of post-World War II developments, namely a sharp rise in the birth rate combined with a rising survival rate of children, migration and immigration, and a desire of young people to remain in school beyond the years of compulsory education. These factors were also reflected in the OECD's 10-year plan, presented in 1960, which addressed itself to the desirability of making educational facilities available to more young people and for longer periods of time, and to provide a general, universal framework of secondary education that would help control the manpower flow of experts among member countries. Concerned about the necessity for flexibility and a technological world, the OECD conference supported the idea of educational planning for economic development; the idea was subsequently adopted by many countries that were searching for the most effective and efficient ways of charting the course of education in the face of increasing birth rates and population shifts.

The second 10-year OECD conference, in 1970, confirmed the earlier predictions. It also indicated the need for teachers and

for experimentation with more efficient ways of teaching (e.g., school broadcasts, television use in classrooms, programmed learning) at a time when increases in secondary school enrollments ranged from 50 to 300 per cent.[8] The projections for 1980 showed a further increase in overall (primary, secondary, university) enrollment. In addition, many countries have extended their compulsory education to nine years, which has resulted in larger enrollment at the secondary school level. An appropriate example of the thought behind the development of new educational programs is the 1970 Structural Plan for the Educational System in Germany, whose authors feel that a tenth year of schooling will provide the individual with the "greatest possible chance of learning and of keeping the Federal Republic competitive in relation to comparable industrial nations."[9]

The general trend towards more and more specialized schooling and the general encouragement for young people to remain in the educational system for a longer period of time raise the questions of universal access and equality in the new European system of education. As was pointed out earlier, social class differences have been partly the result of educational inequality. Despite modernization, the difficulties of overcoming traditional ways of life and established institutional practices remain a formidable barrier to advanced education for a majority of younger people. Although the structure of the educational enterprise in Western Europe has changed and new educational strategies have developed, lower-middle class and lower class members of society still are

typically uninformed, socially isolated, insecure about their intellectual and academic potentials, and, therefore, not within the reach of the educational system.

For example, the working class population in England has not viewed secondary or higher education as a realistic goal; the result is an under-representation of students with working class backgrounds in higher education.[10] In Germany the situation has been similar. A recent report indicated, for instance, that only about six per cent of the male and three per cent of the female students in higher education have working class backgrounds.[11] These statistics basically substantiate an earlier observation by Ralf Dahrendorf in connection with a discussion of social mobility within German society.[12] In France the feeling that children do not need to complete their secondary education persists among small farmers and workers.[13] In this connection it is interesting to note that the Soviet Union faces similar problems with an over-representation of the middle class in higher education, while members of the lower class show little interest in moving beyond their ranks into the Soviet intelligentsia.[14] Studies in the United States have revealed equally obvious class differences at the college level.[15]

In general, the conditions of education in a democratic state or in a federation like the proposed European community provide a test of the workings of the system: democracy presupposes equality and access to channels of communication, that is, opportunities for and participation in advanced education for all citizens. Although the countries of Western Europe offer a more

unified and generally more conducive educational environment than they have in the past, they have yet to break down the social barriers which have not disappeared despite an era of democratization after World War II. The resistance to change has serious consequences. Jean Floud talks about the close relationship between social class and educational inequality; she claims that "at any given level of ability, it is both cause and consequence of inequalities of educational opportunity, in the sense of unequal chances of access to educational institutions or facilities," which may in the end "affect the very structure of ability itself."[16]

In most European countries the social status reached with the completion of secondary school education or a university education is not equalled by any other form of education, although in recent years attempts have been made to upgrade technical schooling and to incorporate vocational institutions into a new conceptual framework of education for everyone. Frank Bowles has offered some major reasons for the increasing demands for more vocational-technical training based upon the economic changes in post-war Europe.[17] It may be true that the avenue of vocational-technical training will help increase the manpower pool of specialists, but it is doubtful that the social class distinctions between academically trained and technically schooled individuals will disappear; the prejudices of class differences have in effect been made more distinctive, and the respectability of a career based upon a course of technical studies will only be attractive to those middle and lower class members who see an opportunity to perfect their skills and to

advance beyond their own levels of education without moving across the social barriers that separate the academic elite from the rest of society. For all practical purposes, a university education is the medium of the upper and upper-middle classes in Western Europe from which the leadership for all phases of social and political life will emerge. In this sense it is desirable to utilize technical training as an attractive educational device that will equip young people with the necessary skills and specializations that are needed to maintain a highly technological society.

Within the context of the developments of politics and education in Western Europe, it is suggested that the major problem of implementation of new ideas is bound up with the problem of overcoming social barriers in various national settings.

One of the answers may lie in the study of communication, and more specifically in what mass communication as a technology and in its more general institutional form can do to assist in overcoming those obstacles that resist innovations in education. A recent OECD report states that "change is notoriously slow in getting accepted. Complete diffusion of successful 'innovations' in the field of education appears to take approximately fifty years after the first 'authentic introduction.' It has been estimated that approximately fifteen years elapse before 3% of the schools adapt the innovations."[18] While the same report acknowledges that the rate of adoption has sharply increased in recent years, it also suggests the inadequacy of the school systems as environments of change.

What is needed is a broader social base for the popularization of education as a continuing process of communication and knowledge utilization that will supplement the efforts of teachers and other professional knowledge brokers. More specifically, some thought must be given to the question of mass communication in education as a permanent process and how it may help reduce social barriers and bring about educational equality faster and on a larger basis than ever before. The electronic mass communication media in particular contain the potential of a democratic communication system, since they could provide a framework for social interaction through the exchange of ideas and the presentation of knowledge and information that could also help realize the goals of education as a desirable social activity in a democratic setting. With the individual and his concerns at the center of such a system, the success of any mass media democratization depends upon the successful application of ideas of access and availability to legal and constitutional norms that regulate media operations today.

Since education is not confined to the formal structure of the educational process that remains at the center of OECD activities and concerns, a discussion of permanent education should exceed the description of social and political aspects that deal with occupational advancements and professional improvements required by the growth of an industrial society. Permanent education in this sense is defined as a broader social phenomenon that goes beyond the particular needs for technical skills and deals with

all fields of knowledge in modern society. Despite the larger implications of information as the source of power, influence and prestige, most discussions of the involvement of the mass media in the educational process proceed on the level of diploma or degree programs, adult education, and instructional programs.[19] Basically, the use of the electronic media has been discussed in two different but related frameworks: in the context of media use for direct teaching and in the context of media use as a form of enrichment of existing educational programs or school curricula. According to recent discussions, some countries are shifting more time and resources to direct-teaching broadcasts, while others are still using radio and television as additional or supplementary sources of information and knowledge about the world.

Great Britain, for example, through BBC and ITA features both approaches but uses television for most direct-teaching programs. France, because of an acute teacher shortage a few years ago and in an attempt to utilize the best possible teaching methods, has embarked upon a direct-teaching program. The Italian telescuola is often cited as one of the most ambitious direct-teaching efforts in Western Europe; it developed as a response to the "necessity to supply the deficiencies of . . . educational institutions and the opportunity to step in, when lack of instruction reduced the possibility of social evolution for part of the population.[20] Denmark and Sweden support the enrichment approach in their uses of the electronic mass media. "Education in Denmark is on a level that does not make it necessary to have direct-teaching in school

"radio, and . . . programmes are therefore principally to be regarded as supplement and enrichment and an incentive to the work of the teachers."[21] Likewise, Sweden's enrichment program is based upon the philosophy that "schools have so far enough qualified teachers and that these teachers should always be the centre in any teaching process in which television and other educational aids are involved."[22] The experiences in other countries are quite similar. Typically, direct-teaching efforts are greatest in developing countries or in countries with teacher shortages or problems of population density, for instance. In addition, the German Telekolleg features a vocational high school program that integrates broadcasting, correspondence work and direct contacts with teachers. The program leads to state diplomas and entrance into technical institutions of higher learning. The Fernseh Akademie in East Germany also provides opportunities for more informal study, and acquisition of skills and is used by some students to supplement secondary school level requirements. In Great Britain the Open University, which started in 1971, began a new venture in higher education. The approach combines television lectures, correspondence course work and meetings with tutors and short residential courses. It is designed to offer educationally disadvantaged groups of people the chance to receive a university degree.[23] Finally, in-service training represents still another approach to knowledge utilization and diffusion through radio and television. In France the Institut Pedagogique National operates a series of radio and television programs designed for elementary and secondary teachers who are

acquainted with new teaching techniques, publications in their specializations and other relevant materials. Similar systems exist in a number of European countries.

The mass media, particularly radio and television, can and do play an important part in the learning process by providing educational institutions with the most economic and efficient ways of disseminating knowledge. Their disadvantages are equally well known; they lack the quality of a face-to-face learning environment, and they represent a one-way channel which makes them susceptible to manipulations of various kinds. But their use also emphasizes the mechanization of man's environment and raises the question of the success of mass education. J. A. Lauwerys recognizes the dangers of modern educational efforts; he says that "those who cannot read are the victims of some form of verbal illusion. Merely teaching them to read does not free them from verbal illusions, but in addition makes them more liable to exploitation through print."[24] What is needed, in addition, is the company of other men to "strengthen our moral, intellectual and emotional life to counteract the power of mechanization."[25]

Mass Media and Education

Beyond the role of mass communication media as educational technologies lies their role and function as communication agents in the general process of permanent education and in the achievement of educational equality.

The following considerations are offered within the framework of a political system that recognizes freedom of expression and a free press and whose contributions to the history of journalism and mass communication technology have had a world-wide effect. But while earlier assessments viewed the contribution of the mass media in society as a positive force in the democratic process, recent evaluations in the light of scientific and technological achievements and shifts of economic power have resulted in more critical evaluations. Morris Janowitz observes that "the mass media have been subjected to uninhibited social criticism by some intellectuals and practitioners who see them as contributing to the demise of civilization. These critics hold the view that the growth of the mass media, in and of itself, deteriorates moral and intellectual standards. This point of view stands in contrast to the aspiration of intellectuals at the turn of the century, who hoped that with the proliferation of the mass media, modern society however large and complicated, could yet fulfill the requirements of the democratic process."[26]

Within the European community, information and education are the primary goals of most systems of broadcasting. While the press has undergone a number of drastic changes since World War II, the electronic media have enjoyed three decades of continuing growth and increasing popularity.[27] For a program of permanent education to succeed it will be necessary to develop an electronic mass media system that is relevant to the cultural and social environment of its audiences, free from commercial interests, and accessible for individuals or representative groups in society.

The question of relevance must first be understood in terms of an attempt to provide regional programming that pertains to the particular problems of an area, not necessarily within the national boundaries, which shares common economic or social concerns. A number of years ago and before the age of television, Charles Siepmann already warned about the serious disadvantages of centralized radio networks. He admits some advantages of centralization of control but suggests that "culture is most enduring which is native, which springs from the soil. Culture cannot be distributed by mail order. It is in this sense above all others that New York is not America; still less is Hollywood. As radio becomes centralized, the role and status of local stations diminish. They become increasingly the retail distributors of a large central store. And yet for that large percentage of the population which lives in rural or small urban districts, research has shown that the influence of local personality, the voice of the neighbor, still is greater than that of radio's giant creations . . . . Even more dangerous is that further consequence of centralized control by which the contact of the men of radio with their public becomes increasingly remote and impersonal. The listener is reduced to a bare statistic, an object of manipulation and exploitation . . . ."[28]

Secondly, relevance must refer to the necessity for diverse programs. In a recent study which destroyed much of the myth of the blue-collar worker and his mass media consumption, it was stressed that the workers' media use encourages perpetuation of the limited "cultural and artistic horizons, of limited social activity and

general level of interest" that reflects the educational experience of the lower class. The author claims that "the blue-collar worker is not a heavy consumer of the aggregate of all media. His consumption of printed media is low and centers on the least literarily demanding. His unusually heavy use of the non-print media has gradually shifted from films via radio to television. In these media he is a slightly above-average consumer of light entertainment and below-average consumer of more demanding programs. Age, sex, and level of education, however, seem to be much more relevant factors then (sic) occupational groups or class-membership however defined. The limited researches available show a significant rise in the level of use of the more demanding media and programs, correlated significantly to degrees of skill and of responsibility in work on the one hand and to degrees of skill and of initiative in leisure activities."[29]

These findings support earlier research which suggested that the process of knowledge diffusion through the mass media, for instance, tends to increase rather than to eliminate the cultural inequalities, since it reinforces the differences which were already established during the period of formal education; or differently expressed, people tend to understand and get more out of a communication environment to which they have brought more knowledge.[30] In addition, the educator who wants to utilize the mass media must thoroughly understand the workings of the medium and the audience. As Gilbert Seldes points out, "The sheer mass of this highly accessible entertainment constitutes a sight-and-sound curtain through which the educator must penetrate, and unless he learns to

use the medium itself, his access to the adult audience will become impossible."[31]

The nature of some of the broadcasting systems in Western Europe accommodates at least some of the demands of relevance and accessibility. For instance, the Netherlands provide radio and television time to representative non-profit organizations. Through the Dutch Broadcasting Foundation, the organizations share technical facilities. They produce their own programs, while general programming of news, Eurovision programs and educational television are in the hands of the Foundation. As a result of proportionally shared air time, a number of groups have access to the airwaves, including political parties and various church and humanitarian organizations. In France, on the other hand, radio and television were under state control until 1964, when the Office of Radiodiffusion-Television Francaise was formed. Government officials and private members of the council develop broadcasting policies. Since the government is in charge of appointing the director general and his two deputies, problems of government influence remain despite a recent liberation of ORTF policies concerning political broadcasts, for instance. In Great Britain a commercial network has been operating since 1954; it was strengthened by the 1964 Television Act that gave the Independent Television Authority the power to license stations and to regulate program content to provide a public service of disseminating information, education and entertainment. The BBC, on the other hand, as a public body with an independent board of governors to run the Corporation, is expected to remain free from

pressures of the marketplace and to retain its high program standards. But the monopoly situation and its financial security have been lost, and the distinction of being the only country in Western Europe that has both public service and commercial broadcasting services may, in the end, result in the collapse of the traditional system. The competitive situation that has been described by some as healthy and invigorating for all concerned has its disadvantages as well. John Scupham argues that "the justification of public service broadcasting lies in its ability to satisfy a wide range of present interests and to open up wholly new possibilities of understanding and enjoyment. It can achieve neither purpose if its programming planning is dominated by the desire to keep ahead of a rival with other aims at every hour of the day. The more its output comes to resemble that of its commercial competitors, the less the reason for its own continued existence. It must provide something for everybody, but it misconceives and betrays its role if it lowers standards and sacrifices minorities in pursuit of a continuous numerical predominance."[32] The results of a comparative study of a week of television programming in New York and London suggest that there are more similarities than differences between commercial and non-commercial broadcasting systems.[33]

Developments in other European countries indicate that there exists a tendency to yield to economic considerations and to disregard long-range public interests. Specifically, the presence of commercials on many national networks is a fact of life,

their numbers will increase, and this trend could be interpreted as commercialization at the expense of a free flow of information and the presentation of new and diverse programs. It is easy for Europeans to point to the success of the commercial system of broadcasting in the United States without realizing the dangers and drawbacks of the system. It is also feasible to think that the mounting pressures of the industrial complex in Western Europe (which includes major U.S. companies) will make it increasingly more difficult for national networks to maintain their autonomous positions. Presently most national broadcasting organizations are engaged in a variety of independent productions of national and international programs without the restraints of a commercial supply and demand system.[34]

Closely connected with the discussion of a commercial broadcasting system that may threaten the independence of some potentially democratic forms of broadcasting in Western Europe is the question of free and equal access to the channels of communication. Balance of presentations, considerations of different viewpoints in society, fairness and accuracy are necessary conditions for the success of a democratic broadcasting system; however, time and space must also be provided for the direct presentation of individual or collective ideas and opinions that could contribute to the common good. Presenting his maxims for a contemporary communication system, Eric Weil proposes that "if you want the public to listen to you and if you believe in democracy, do not pretend that you are able to decide for the people. If you take

your responsibilities seriously, do, on the contrary, everything in order to oblige them to decide for themselves and to put themselves in the place of the responsible statesman. This does not mean that you are not entitled to communicate what you believe to be the truth, or to give advice. The opposite is necessary; you will have to communicate to them everything you believe to be pertinent to the question under scrutiny, to the extent of telling them why you think that this question is really a political question . . . . You will have to trust that in the long run the people, and you with the people, will learn in spite of all the distrust and all the heavy responsibilities for this distrust, to appreciate reasonably reasonable arguments for and against a given proposal--that they will learn not to ask why you say what you say, but if what you say is true, coherent, sensible, healthy."[35]

It should be added that the public must also have the right to the opportunity of public questioning in the context of mass media presentations. Therefore, it will not be enough to provide an ideal framework of public interest broadcasting as exemplified by the BBC charter, for instance. One must go a step beyond the original idea and provide the public with a communication forum to foster the development and continuation of a social structure that permits and encourages learning. Permanent education means the continued participation in the public dialog and, through this participation, in a meaningful contribution to the welfare of the community. Only appropriate legislation and the development of regulatory powers will bring about the structural changes that are

needed to accommodate such a system of broadcasting. The rise of economic interests to positions of domination and control of mass communication media in Western Europe has not occurred overnight; commercialization, subtle changes of values and an emphasis upon material aspects of everyday life are being accompanied by reinforcing mass media activities. Although this involvement of the mass communication media may be unavoidable in the context of their attempt to reflect the movements of society, it becomes dangerous when counter-arguments and diversity of ideas do not come forward, when suggestions remain unchallenged, and when the mass media do not provide the leadership of responsible discourse and discussion of public problems.

An interesting proposal to "sell" the values of science and technology to the American public was recently advanced, which is an example of an attempt to change people's minds through both subtle and rather open propaganda techniques. This proposal sounds like an open invitation to unbalanced mass media presentations and indicates the abdication of the responsibilities of a democratic system of mass communication. The proposal suggests that a three-fold strategy be developed for television, "first, to produce a large number of programs of the general documentary sort for both public and commercial outlets; second, to create a means for ensuring that information on or about science and scientists is competently presented in general entertainment programming (if science is to be included in soap operas, it ought to be good science); and third, to encourage the production, on a regular basis, of programs

that treat scientists, both real and fictional, as people. To date, there has been no scientist or engineer counterpart of 'Marcus Welby, M.D.' or 'Mr. District Attorney.'"[36] The proposal raises many questions; the question of whether one can or should popularize science, for instance, is as important as the question of what can and should be done to present other viewpoints, values and ideas about progress and the good life in contemporary society.

A democratic system of mass communication however developed will help bring about the participation of individuals in their right to speak and to share with others their particular beliefs; it will thus demonstrate the pluralistic nature of education and help break down the monolithic educational information system of the past; it will teach individuals to be human which, according to Dewey, requires "the give-and-take of communication" and result in knowledge which is a "function of association and communication, it depends upon tradition, upon tools and methods socially transmitted, developed and sanctioned";[37] and finally, it will protect the individual against the paternalism that results when bureaucratic or commercial interests become decisionmakers and gatekeepers. As long as all members of society are given an opportunity to speak and to be heard, as long as their work and contribution receive fair notice, as long as their participation in the construction of their social environment is assured, the democratic principle of mass communication systems will continue to grow. There are many dangers, and many questions remain unanswered. What is suggested here is that it must be possible with the present state

of technology to preserve those conditions of social life that result in the freedom of a participatory democracy which embraces the idea of permanent education as a prerequisite to its growth and stability and as a sufficient condition of a democratic system of broadcasting. In summary, the failure of education as an institution of social control in Western society is at least partially based upon its inability to overcome social class barriers despite a period of democratization after World War II. The monolithic structure of education experienced moderate revisions in this period, but does not yet sufficiently allow for other, perhaps equally important, information systems in society. A redesign of the mass media system, and broadcasting in particular, to allow for individual participation and communication presents an ideal opportunity for the realization of educational goals in the spirit of a democratic process. The incorporation of the mass media into the educational system is based on the rights of free speech and education as constitutional guarantees.

If the mass medium of television is educational, then questions of its form and content ought to be of concern to professional educators.

These questions could be addressed through an analysis of public broadcasting as a content-centered educational method, and an analysis of cable television as a form-centered educational method. This would limit the definition of educational television to the mass medium, and would exclude instructional technology used for direct teaching in the classroom.

This approach is based on an assumption and an observation. The assumption is that learning is a continuous process which draws from all of an individual's experience, not only from classroom experience. The observation is that the mass communication media, especially television, are a pervasive part of the American environment. Nevertheless, the American formal educational system is designed to isolate the school and the child from the larger environment and thus works against integration of the mass media, specifically television, into the formal learning process. It also denies to professional educators much influence over the education individuals might be getting through the mass medium of television.

Television is both an untapped educational resource and an educational system controlled by people whose interests tend to be political and economic rather than educational. The following sections will attempt to show, first, that television is educational; second, how this form of education is politically controlled; third, the underlying concept of man implied by existing control; and, fourth, how the existing system could be improved.

The definition of education which informs this discussion is a broad one which equates education with socialization. Formal education is then a particular goal-directed activity subsumed under education. In this scheme, the largest amount of educational activity would be informal learning occurring outside the school. Learning is understood to be the result of symbolic interaction of the learner with his environment. The meaning of interaction with the things of one's environment is learned through interaction

with the people in one's environment. In other words, education is a process of human communication. The learner participates in symbolic interaction with others to create a community of experience and meaning.[38]

The Educational Nature of Television

When education is defined as a communication process, media are accorded a prominent position in the process. Human communication and human learning occur through symbolization, for we have no direct or immediate access to our environment. Since knowledge of an objective reality is not available to us, and since all experience is mediated, the different media used in any given interaction would seem to dictate to some extent what is communicated or learned in that interaction.

This argument could provide a basis for urging the necessity of the form-content distinction made earlier in the paper. One could justify the emphasis on the form of the medium by adopting the approach of Harold Innis, that the media of communication have a formative influence on a given culture, or of Marshall McLuhan, that the media of communication have a formative influence directly on the perception of members of a given culture.[39] Both approaches attribute the formative power specifically to the medium, absent any consideration of content whatsoever.

The content distinction could be justified by the many existing studies of effects of the mass media.[40]

Using the content-form distinction as a starting point may encourage the bifurcated approach described above. It is urged, however, that such a dualistic approach to media and education is in large part the problem to be overcome if media and formal education are to be integrated.

The distinction is made here only as a convenient starting place for improvement of the educational use of television given the existing organization of the medium. It is not considered a necessary distinction to be perpetuated; rather, it is a bifurcation of a single phenomenon which we should attempt eventually to correct. Any further discussion of the two aspects should be understood in this light.

The interdependence of form and content, which makes emphasis on one at the expense of the other an artificial distinction, is set forth by John Dewey, who used the term, medium, in a technical sense. A medium is to be distinguished from mechanical means which only lead from one event to the next without affecting those events. Media, in contrast, are communication forms which are incorporated into an activity, become part of the end result of the activity, and recreate in the present the past of which they are a part.[41]

By definition, then, the media of human communication are forms of interaction but are also inextricably interwoven with the content of interaction. Emphasis on only one aspect rather than both misrepresents the nature of media and thus their educational significance, for media, because they do allow integrated experience, provide the continuity which makes experience meaningful.

This explanation of media may seem insufficient to explain mass media, for mass media are often assumed to have some additional characteristic distinguishing them from other media. This is, however, an insupportable argument, for mass media differ from other media only by the modifier, which is not definable in any way that excludes from the definition other media, for instance, language.

Television merits specific attention as an educational tool primarily because it is a relatively new and popular medium,[42] the potential of which has not been significantly explored. It seems to be a powerful medium, too, not because of its "mass" nature, but because of the involvement of the individual with it.

Classroom use of television for direct teaching would not seem to share the educational potential of television in the informal educational environment for, in the formal environment, use of the media tends to be imposed on the learner by those in authority, while in the informal environment the learner tends to choose from among competing media those he wishes to use. Such classroom use of media assumes that learning is a linear process in which A imposes some specified content on B. This "hypodermic needle" model of learning, based on stimulus-response assumptions about the nature of communication, ignores the role of the audience in the process. Denis McQuail explains the error of this approach when he writes, " . . . it has become clear that the structure of interpersonal relations in the audience mediates the flow of communication content and limits and determines whatever effects occur . . . . "[43]

The fragmentation of the television medium into educational and commercial television reflects the institutionalized fragmentation of education into formal and informal systems. The isolation of the formal educational system from other social institutions implies the assumption that the experience of the learner is compartmentalized rather than unitary and continuous.

This fragmentation of the educational environment cannot be described as a natural or necessary evolution. It got that way because it was designed that way. In the United States, institutions such as the educational system and the mass media are designed and maintained through the passage of laws for their development and operation. An investigation of the legal control of television may help to determine why it has not been integrated into the formal educational system.

Political Control of Television

Broadcasting falls under the aegis of the First Amendment to the U.S. Constitution and shares much of the regulatory structure of all communication media. Technological peculiarities, however, have led government to impose upon it types of formal control not shared by other media.

The technological peculiarity which shaped the unique course of broadcast regulation is the nature of the broadcast spectrum, which offers a finite number of frequencies. This characteristic was used to justify development of a regulatory theory that

conceived of television (and radio) as a limited access medium. That a kind of public participation in television has always been available indicates, however, that the limited access controls that have been developed for television are not strictly necessary, but are required largely because someone, somewhere, sometime, chose to value economic returns over other considerations.[44]

The regulations out of which these controls have developed are few. Three laws, the 1912 Radio Act, the 1927 Radio Act, and the 1934 Communications Act, provide the regulatory foundation.

The 1912 Act did little more than provide that the Secretary of Commerce would be the official radio licensing agent for the government. It did not provide any discretionary standards for licensing or operation. By 1923, the limitations of the act were evident, for, although the spectrum was limited, the legally-created right to licenses was not. With 576 radio stations already operating, Commerce Secretary Herbert Hoover attempted to employ some self-imposed discretionary standards, and his attempt resulted in a circuit court decision which explicitly stated that the licensing agent had a mandatory duty to issue licenses to all valid applicants and could exercise no discretion in performing that duty.[45]

Since no valid applicants could be denied a license, the spectrum quickly became overcrowded, with interference among stations developing chaotically. Nevertheless, a 1926 Attorney General's opinion reaffirmed the court decision that no discretionary powers were to be used in granting licenses or prescribing

methods of operation. The argument supporting the opinion was that Congress had specifically retained the power to develop discretionary standards, but had not yet done so. Refusal of the courts to fashion ad hoc standards in this situation was probably an invitation to Congress to correct its oversight.

The correction was attempted in the 1927 Radio Act, which established the Federal Radio Commission and adopted a discretionary licensing standard, borrowed from public utilities legislation, of "the public interest, convenience, and necessity."

As communication technology developed beyond radio, the need was felt for a more extensive regulatory statement. The 1934 Communications Act established the Federal Communications Commission (FCC) as the permanent regulatory body and retained the discretionary licensing standard adopted in the 1927 Act. While this has remained the core of broadcast regulation, it has been augmented and clarified by various court decisions. A recent decision, Red Lion Broadcasting Co. v. Federal Communications Commission, 395 U.S. 367 (1969), summarizes the rationale guiding broadcast regulation and reaffirms limited access as the dominant theory.[46]

Since it is the agency controlling television, a discussion of the regulatory structure of broadcasting requires an examination of the powers of the FCC. Theoretically, its powers are extensive, and have been developed in three general areas. Those areas, as delineated by Thomas Emerson, focus on ownership and control of broadcasting facilities, programming, and access to broadcasting facilities.[47]

Emerson's three categories of regulatory power will be used below in examining the role of the FCC.[48]

(1) Ownership and control of broadcasting facilities: The multiple ownership rules of the FCC are not mentioned in the 1934 Act, but are an exercise in discretionary power. They forbid nationwide ownership, by a single individual, of more than seven AM radio, seven FM radio, or seven television stations, with no more than five of the television stations being in the VHF (very high frequency) band of the spectrum. In addition, a single individual may not hold more than one license on each type of broadcast facility in a single community. Thus, while a single individual may not control two television stations, or two AM or FM radio stations in one community, he may control one television station, one AM radio station, and one FM radio station in the same community. The possibility that the same individual might also own a community newspaper is not taken into consideration by the FCC multiple ownership rules.

Although the rules are an acknowledgement of the undesirability of monopoly ownership of mass communication media, they are not a very effective tool to combat such an ownership pattern.

(2) Programming: This is a difficult area for the FCC to regulate, for it raises First Amendment issues of censorship and government control of expression.

Authority to control programming is based primarily on FCC power to grant three-year licenses and to renew such licenses on the basis of the standard of the public convenience, interest, and

necessity. Attention is not given to individual programs; rather, the concept of balanced programming is used to determine whether licensees are devoting enough attention to specified categories of content designed to meet FCC conceptions of audience needs and desires.

These categories were first outlined in a 1946 FCC document, Public Service Responsibility of Broadcast Licensees, popularly known as the "blue book," and were not revised until the FCC issued a new "Program Policy Statement" on July 29, 1960.[49]

The balancing concept may be evolving slightly from balanced programming by each individual station to balanced programming in an overall broadcast area achieved by licensing a variety of specialized stations which complement one another. The FCC has taken the latter approach in metropolitan areas, recently.

(3) Access to broadcasting facilities: The FCC has developed one major rule in this area--the fairness doctrine--while a second, the equal time rule, was included in the 1934 Act. A third idea, that the First Amendment includes a general public right of access to the mass media, has been receiving increasing attention, but has not yet been formally accepted.

The fairness doctrine, based on the discretionary licensing standard of the public interest, convenience and necessity, is an attempt to make the full and impartial airing of ideas of public interest one condition of licensing. It was first presented in the 1949 FCC "Report in the Matter of Editorializing by Broadcast Licensees" as a remedy to the probability of one-sidedness and

bias in broadcast editorials. It was added to the Federal Communications Act by amendment in 1959.

The fairness doctrine has been criticized as an infringement of First Amendment rights of licensees. Because it requires licensees to seek out all sides of a public issue they have chosen to air, it can conceivably be thwarted by licensees refusing to consider any controversial issues at all, and has been criticized on these grounds, also. Nevertheless, the Supreme Court's 1969 Red Lion decision upheld the constitutionality of the fairness doctrine. Recent court decisions have grappled unsuccessfully with the question whether the doctrine, which assumes that the public has a right of access to a broad spectrum of ideas from the broadcast media, can be extended to legitimate the idea that individual citizens have a right of access to media facilities to air their opinions and ideas. A general right of access to the media must be recognized in the courts or by Congress before public participation in the media can be significantly developed.

Equal time is required by Section 315 of the Federal Communications Act. Designed to insure the impartial airing and debate of political issues in broadcast media, the text requires, basically, that "If any licensee shall permit any person who is a legally qualified candidate for any public office to use a broadcasting station, he shall afford equal opportunities to all other candidates for that office in the use of such broadcasting station . . . . "[50]

Interpreters of the statute point out that "equal time" is a misnomer, for the language of the statute requires only equal opportunities for use of facilities. "The simple operational rule of 315 is that if one candidate is allowed to purchase prime time then all his 'legally qualified' opponents must be allowed to purchase prime time."[51]

FCC regulations look fairly good on paper, but their importance is largely determined by the FCC's ability to enforce them.

Three main enforcement methods are available to the FCC. The most common is simply a letter to the licensee suggesting he change some aspect of his operation. The second is a cease-and-desist order, which the FCC insists it has the power to use but which it many times refuses to use on the grounds that such an order violates the anti-censorship rule of the Federal Communications Act. The third, most powerful, and least used method is denial of an application for license renewal.

That the second and third sanctions available to the FCC are seldom used is difficult to understand unless one considers the operating conditions of the FCC. The problem, it seems, is not lack of regulatory power, but lack of means to operationalize that abstract power. Understaffed and inadequately financed, the FCC is a weak institution because Congress designed it to be a weak institution, which tends to protect the vested economic interests of established media owners and the political and economic interests of many congressmen more than the public's interest.[52]

With commercial television dominated by the three networks, ABC, CBS, and NBC, and operated principally for economic gain rather than for the socio-political principles which FCC regulations appear to attempt to foster,[53] the inception and development of educational television has not been well-supported. The existing dual system of commercial and educational television was not a necessary development but a result of choices made by the communication industry and its regulators. The Columbia Broadcasting System (CBS) seems to bear a major part of the responsibility for the present second-class status of educational television.

When television was only a few years old, and Congress was creating the 1934 Communications Act, some legislators were in favor of allocating spectrum space specifically for educational purposes. This recognition of educational needs was considered unnecessary, however, when representatives of CBS testified that they were already devoting seventy per cent of their time to noncommercial programming, including education. Thus, it was assumed that the proposed educational allocation would be wasteful duplication.[54]

Therefore, as a result of the CBS testimony, among other factors, allocation of space on the VHF band was dominated by commercial broadcasting at the expense of education, which received only a handful of frequency allocations. Education was also ignored in commercial programming. By the time the situation was remedied by the FCC eighteen years later, heavy investments had been made developing the original structure of broadcast organization and educational television was assured of second-class status.

Between the 1934 legislation and the 1952 attempt to correct the errors of the 1934 Act, thought was devoted to the relationship between education and television. Ohio State University, which sponsored an annual International Institute for Education by Radio, provided educators with a forum for discussion of educational broadcasting. Two concepts of the educational role of the broadcaster emerged from these sessions: "(1) broadcasting as an instrument of general culture providing an alternative national program service for the mature adult and the out-of-school child; and (2) broadcasting as a systematized and sometimes total tool of formal education."[55] The shorthand terms for these concepts which are still prevalent today are enrichment and direct-teaching.

The government attitude toward the relationship of education and television is revealed in the Sixth Report and Order of the FCC, adopted April 14, 1952, which finally allocated significant spectrum space for educational uses. First, it specified that development of a dual system of commercial and educational television did not relieve " . . . commercial licensees from their duty to carry programs which fulfill the educational needs and serve the educational interests of the community in which they operate . . . . "[56]

Second, the Order indicated that the FCC considered education to be a function of the content alone, rather than an integral function of the medium per se, for they were concerned with " . . . the establishment of a genuinely educational type of service . . . . "[57] (emphasis added)

It seems that both educators and industry regulators conceived of television in a dualistic manner, as educational and non-educational. In addition, both seemed to feel that education was a function of content, with its medium of communication being relatively inconsequential.

The FCC's 1952 attempt to provide for educational broadcasting needs has been thwarted by a combination of human and mechanical inflexibility. Herbert Schiller describes the original FCC decision to assign television to the VHF band of the spectrum as "a serious engineering error" and continues:

> More space was needed and it could be obtained only in the higher bands, the so-called UHF. In 1952, the FCC opened up 70 channels in the UHF frequencies, reserving many of them for educational stations. Unfortunately, the set manufacturers were not disposed to produce receivers that could accommodate both VHF and UHF channels . . . .
>
> The net effect of this tangle of commercial interests was to make ETV almost inoperative in the UHF frequencies to which most of its stations had been assigned.[58]

This problem was finally addressed in 1962, when Congress passed the ETV Facilities Act which provided funds for construction of educational broadcasting facilities and required television set manufacturers to build both VHF and UHF (ultra high frequency) receiving capacities into their equipment. The remedy may have

come too late, however, for the dominance of the commercial broadcast interests and the subordination of educational broadcasting had become institutionalized by this time. Schiller explains that " . . . the separation of programming into educational (non-commercial) and recreational (commercial) . . . totally undermines the educational offerings and reduces their impact to marginal benefits."[59]

Educational television did not distinguish itself during the next five years and in 1967, Congress made yet another attempt to revive ETV. On the recommendation of the Carnegie Commission on Educational Television, it passed the Public Broadcasting Act of 1967, which created a federally financed Corporation for Public Broadcasting to develop creative noncommercial programming. The consequences of the blundering history of ETV regulation in the United States are captured in the name of the new corporation. The Carnegie Commission recommended, and Congress approved " . . . a new name, 'public television,' since educational television has become synonymous with uninteresting, poorly executed fare."[60]

As was pointed out earlier, the theoretical basis of American broadcast regulation has been the limited access concept, based on the physical limitations of broadcasting. This theory casts the government in the role of guardian of the public's television use, and the regulatory history indicates that the dominant government view of the public is that it is composed of passive, relatively simple-minded people. Educational television,

which still assumes the passive audience, is plainly labeled "educational" as if to reassure consumers that high-powered commercial programming is not. Television regulatory history thus reflects a larger societal viewpoint which assigns second-class status to education and isolates it from the rest of the environment. This is paradoxical in a society which prides itself on a universal, democratic system of education. Resolution of the paradox depends upon an explication and understanding of the concept of human nature which has been operationalized in our social institutions and traditions.

The Underlying Philosophy

The dominant concept of human nature that is perpetuated in American institutions is that of the Enlightenment, for this was the period during which American institutions were being created. Philosophers of the time assumed a mechanistic, Newtonian model of the universe.[61]

The most significant legacy of the Enlightenment concept of human nature is its assumption about the nature of knowledge. It assumes that the universe is rational and that man is a rational creature who will seek out the truth, which cannot fail to triumph over falsehood.[62] This assumption encouraged development of the democratic concepts of equality and popular sovereignty, for each individual possesses equally the power of knowing truth, and each is thus capable of self-government. The assumption encourages,

through its belief in equality, a faith in universal education. It fosters a distrust of education also, however, for if man has the power to know truth, and if, in a rational universe, the truth must inevitably win out over falsehood, the function of educational institutions is difficult to determine.

The view of man which emerges is a flattering picture of the self-sufficient individual. Nevertheless, it defines man as passive, for the truth will prevail without man's interference. Indeed, human interference may pervert the process and create falsehoods which compete with and must be overcome by the truth. A laissez-faire philosophy is the logical development.

This helps to explain our existing educational television arrangement. Our commitment to education coupled with our distrust of it requires an educational system that appears to have the support of the society but which is rendered relatively ineffectual through isolation from other segments of the society. This is reflected in the television industry: commercial television is highly developed while educational television, poorly financed and partially crippled by regulatory blunders, receives little support.

The mechanistic bias in our philosophy encourages emphasis on technology and perhaps explains our willingness to base broadcast regulatory theory on the physical limitations of the broadcast spectrum.

The preceding analysis may have helped to explain how our conception of human nature shaped existing institutions. It fails to explain, however, why the Enlightenment view of man prevails in the twentieth century, when conditions have changed radically. An obvious explanation is that the formal educational system is primarily responsible, for it is a conservative institution specifically designed to socialize the young into the dominant philosophy of the society. All institutions, including mass media, possess this educative power, but most are not specifically designed for this purpose.

Beyond this rather superficial explanation is the fact that institutions tend to be self-perpetuating, and tend to perpetuate the philosophy they embody. This fact is sufficient for institutional maintenance unless the underlying philosophy becomes problematic, at which point the need for legitimation of it develops. The Enlightenment view of the ability of each individual to know the truth has become problematic because science has encouraged specialization of knowledge and has removed it from the reach of most members of society. "Put more simply, the 'lay' member of society no longer knows how his universe is to be conceptually maintained, although, of course, he still knows who the specialists of universe-maintenance are presumed to be."[63]

The conception of man as knower which our institutions reflect has become problematic because the accepted method of obtaining knowledge has changed. This occurs because the only contact with science that is available to those who are not

scientists is through its technological manifestations in the everyday world, as Habermas argues.[64]

Familiarity with technology gives the non-scientist the false impression of mastery of scientific knowledge. In addition, official uses of technology tend to reinforce the existing values. The combined result is conservative of the established order and its philosophy. For example, consider the legitimating, conservative effect of a contemporary, technologically sophisticated presidential news conference. The event simultaneously pre-empts programming on all three commercial television networks, and the presidential seal is prominently displayed before the president speaks a word.

Our passive concept of man as knower, in its seventeenth and eighteenth century context, was an optimistic model. With the development of science and technology, however, man as knower relinquishes self-sufficiency and his passivity becomes the passive acceptance of technology as the sole contact most members of society can have with the scientific knowledge which legitimates the social order. Technology becomes a new ideology, as Habermas warns.

This result is not something that technology, especially communication media, has done to us. Rather, it is something we have done with technology, largely because of the passive nature we have ascribed to man. It is not a necessary development but the outcome of human choices, for, as Herbert Muller reminds us,

" . . . it is too easy to blame everything on technology. Our most serious problems are political and moral, strictly up to us."[65]

Correction of the problem requires redefinition of man as active rather than as passive. The solution is essentially a matter of education and communication. The need is for an integrated society in which knowledge is a common possession and in which each individual actively appropriates and creates knowledge through participation in communication.

Redefining man as active would change the institutionalized model of knowing and would encourage the idea that all kinds of knowledge are as legitimate as scientific knowledge. The redefinition would conceive of human experience as integrated and would merge formal and informal education. In this way it would lead to the conviction that an individual's "school" is his entire experience.

Improving the System

The final question to be considered is whether television itself could be used as a means of accomplishing this redefinition. Two possibilities mentioned at the beginning of this discussion, public broadcasting and cable television, may lend themselves to the task.

Public broadcasting on conventional television is a potential tool primarily because it is the most realistic and convenient starting point. It would require education through content, but

would suffer in effectiveness because it shares the one-way dissemination characteristic of commercial television, because it assumes the passive audience, and because its strength lies in the regulatory theory of limited access just as does the strength of commercial television. One-way media can, nevertheless, perform an informational function, although they are not likely to have much effect on behavior.[66] One possibility would be an informational campaign, through public broadcasting, about the uses of cable television.

Cable would be a form-centered educational method. Cable could, if we regulate it for that purpose, allow audience participation in the medium and such participation--learning by doing--could prompt a realization of the integrated nature of the learning process and the active character of man. If regulated to this end, cable could provide a genuine alternative to conventional television.

Cable is more flexible than conventional television, which operates on the principle of broadcasting electromagnetic waves from a transmitter to a receiver. Broadcast television is limited in the distance which signals can travel without losing strength; it is subject to interference from large objects in the environment; and it is limited in the number of frequencies available. Cable, on the other hand, can be extended to any distance, is not affected by interference from surroundings, and has a large channel capacity. It operates on the principle of conducting electric signals over the length of the cable. A single cable has a

forty-channel capacity and two cables can be paired to produce an eighty-channel capacity for any given area.

Cable regulation so far has been inconclusive, for, while cable seems like broadcast television in most respects, it denies the theory which underlies broadcast regulation: that of physical scarcity. With the potential of eighty channels in a single community, cable has been called the television of abundance.[67] The Sloan Commission on Cable Communications describes the situation as "regulatory chaos,"[68] and explains that the state of cable regulation is so amorphous because "The Communications Act of 1934, as its date would imply, is not explicit on the scope of FCC authority over cable, and Congress has yet to clairfy the areas of ambiguity."[69]

For lack of federal leadership, cities and states have tended to regulate cable on an ad hoc basis.

A suitable approach for the purposes of this discussion would be federal financing of a comprehensive national cable system, with the bulk of its operation locally controlled. Many programming possibilities suggest themselves, but three seem especially pertinent as educational alternatives:

(1) Requirement that programming on all channels strive to serve specialized audiences, leaving mass-appeal programming to the commercial networks.

(2) Provision of a sufficient number of channels in each community for public use, with limitation on the amount of time any single user could monopolize. Use should be free, and should

admit of only minimum standards of regulation as the First Amendment might require, with no specifications made as to content, and with provision of equipment and technical personnel for all users.

(3) Provision of at least one "educational" channel in each community, not for use by educators, but for experimental use by students, under the same standards as Proposal 2, with the added qualification that technical personnel should be available to teach interested students how to operate equipment.

Costs of Proposals 2 and 3 would be assumed by the federal government, perhaps as a positive responsibility imposed by First Amendment interpretation. In addition, the government would be required to mount an informational campaign to encourage participation in the operation of these public channels. Public broadcasting might be useful for this purpose. Although the general idea of public access may eventually be legitimated through FCC rulings and court decisions, Congress bears responsibility for legislation authorizing the above recommendations.

Such a program, with its support of public participation in the medium, redefines educational television as something the audience does rather than as something done to the audience. This redefinition might promote integration of the formal and informal educational systems through encouraging the idea that education is not merely what happens in the classroom and on an educational television channel, but that it is the whole of one's experience.

In summary, the problem of television and education in the United States is a complex one, but these few conclusions may be

advanced. The power of the television medium rests not with the technology, but with human use of it. Putting the medium in this perspective may actually increase its educational effectiveness, for concentration on technology *per se* encourages definition of education as that which occurs in the schoolroom only. Concentration on the human interaction made possible by the medium, however, suggests that television may constitute an informal educational system as important as or more important than the formal educational system.

The existing isolation of education in society generally, and in the television medium specifically, reflects the passive nature we have attributed to man and suggests that we who have developed and maintained these institutions have not developed an integrated, active concept of man. In circular fashion, this institutionalized fragmentation of experience will be passed on to each generation until we revise our institutions to reflect a different model of human nature. This paper has attempted to suggest ways in which a single institution, television, might be restructured toward that end.

Suggestions for Further Studies

The following proposals reflect the major arguments in the paper which should be considered as areas of research and policy development.

1. The development of a prototype M.A. program in mass communication and society to stimulate interest and provide guidance for a more formalized process of knowledge utilization among teachers. The course would take advantage of existing television technology and current programs by incorporating aspects of commercial and public television programming into a set of television lectures, correspondence courses and brief, on-campus sessions on a year-round basis. The immediate goal would be to assist teachers in reaching their advanced degree objectives through off-campus instructions; the long-range goal would be an expansion of sources and resources for the teacher and the development of critical faculties among television viewers.

2. The design of a cross-cultural study of "popularizing" the acquisition and use of knowledge in adult populations with a specific emphasis upon the uses of television programs and their appeal to audiences. The study would include problems of adult education and of how a system of permanent education could take advantage of the reading and viewing habits of educationally disadvantaged segments of the population.

3. A study of access to the mass media in the framework of the right to education. The project would include a comparative study of legal systems and broadcasting regulations in Western Europe and the United States with an emphasis upon the constitutional guarantees of freedom of expression and the relationship to education as a universal right.

4. A study of the judicial branch and the mass media with regard to how general policies of courts pertaining to First Amendment questions are carried out by the mass media. The research would concentrate upon the reaction of the electronic media to a number of recent Supreme Court decisions ranging from editorial opinions to policy changes of a selected number of stations and networks.

5. A feasibility study of cable television as a potentially democratic system of mass communication. The project would consist of an analysis of the present organization of cable television with respect to its legal and economic components and consider problems of reorganization of the system to maximize cable television use among individuals and citizen groups.

Notes and References

1. Northrop Frye, from a symposium, The Ethics of Change, quoted in Doreen Stephens (ed.), Report of the Second EBU Workshop for producers and directors of television programmes for young people. Geneva: European Broadcasting Union, 1970, 55.

2. John Dewey, Democracy and Education. New York: Macmillan, 1916, 9, suggests that "education consists primarily in transmission through communication. Communication is a process of sharing experience till it becomes a common possession."

3. Emile Durkheim quoted in T. B. Bottomore, Sociology, A Guide to Problems and Literature. London: George Allen & Unwin Ltd., 1962, 262.

4. For a discussion of this notion see Jürgen Habermas, Toward a Rational Society: Student Protest, Science, and Politics. Boston: Beacon Press, 1970.

5. John Dewey, My Pedagogic Creed. Washington, D.C.: The Progressive Education Association, 1929.

6. Robert M. Hutchins, "Permanence and Change," The Establishment and All That. Santa Barbara: The Center for the Study of Democratic Institutions, 1970, 128.

7. Lewis Mumford, Technics and Civilization. London: Routledge, 1934, 370, had pointed out earlier that "new changes in our conceptual apparatus are rarely important or influential unless they are accompanied, more or less independently, by parallel changes in personal habits and social institutions." The quote in the text is from his later book, The Condition of Man. London: Martin Seckert & Warburg, 1944, 63.

8. For a discussion of the growth in enrollments see Robert H. Beck, Change and Harmonization in European Education. Minneapolis: University of Minnesota Press, 1971, chapter 3; and Klaus Hinst, "Die Entwicklungstendenzen in den Bildungssystemen Westeuropas," Frankfurter Hefte: Zeitschrift für Kultur und Politik 26:4 (April 1971), 255.

9. Beck, 60.

10. Saul B. Robinsohn and Helga Thomas, Differenzierung im Sekundarschulwesen. Stuttgart: Ernst Klett Verlag, 1968, 49.

11. Beck, ibid., 71.

12. Ralf Dahrendorf, Society and Democracy in Germany. Garden City: Doubleday & Co., 1967, 101, refers to the number of working class students at German universities in the late 50's and early 60's.

13. Reported in Beck, 77.

14. Ibid., 74/75.

15. Dael Wolfle's study is reported in Beck, ibid., 95.

16. Jean Floud, "Social Class Factors in Educational Achievement," in Ability and Educational Opportunity. Paris, UNESCO, 1961, 94.

17. Frank Bowles, "Education in the New Europe," in Stephen R. Graubard (ed.), A New Europe? Boston: Houghton Mifflin, 1964, 452, mentions a sharp rise in urban populations followed by new patterns of communal living; industrial concentrations and erosion of small enterprises; and a rising demand for technical personnel coupled with a decrease of the farm labor force.

18. In Modernizing Our Schools: Curriculum Improvement and Educational Development. Paris: OECD, 1966, 31.

19. For a discussion of broadcast media in adult education, see Ignacy Waniewicz, Broadcasting for adult education. Paris: UNESCO, 1972 and the report of a meeting of experts on mass media in adult education and literacy, 45.

20. Maria Grazio Puglini, "Report on Telescuola," Proceedings of the Second International Conference of Broadcasting Organization on Sound and Television School Broadcasting. Tokyo: NHK, 1964, 91.

21. Jorgen Juulsgard, "Report on Danish School Broadcasting," ibid., 120.

22. Sten-Sture Allebeck, "Present Trends in School Television Broadcasting in Sweden," ibid., 196.

23. For a discussion of John Huffman's paper on the Open University and the use of television see appendix A.

24. J. A. Lauwerys in United Nations Preparatory Educational, Scientific, and Cultural Commission, Fundamental Education: Common Ground for All People. New York: Macmillan, 1947, 271.

25. Robert Ulich, The Education of Nations: A Comparison in Historical Perspective. Cambridge: Harvard University Press, 1961, 72, poses the question, "will our educational agents--not only schools, but also churches, political parties, family, and friends--sufficiently strengthen our moral, intellectual and emotional life to counteract the power of mechanization?"

26. Morris Janowitz, "Communication Mass: The Study of Mass Communication" in David L. Sills (ed.), International Encyclopedia of the Social Sciences. New York: Macmillan, 1968, Vol. 3, 41.

27. For a discussion of post-World War II developments of the press, see Hanno Hardt, "The Plight of the Daily Press in Western Europe," in Heinz Dietrich Fischer and John Merrill (eds.), International Communication. New York: Hastings House, 1970, 288.

28. Charles A. Siepmann, "Radio and Education," Studies in Philosophy and Social Science IX (1941), 111.

29. Judith B. Agassi,"The Worker and the Media," Archives Europeennes de Sociologie XI:1 (1970), 66.

30. For an excellent review of the literature of diffusion of science information, see Renaud Dulong and Werner Ackermann, "Popularisation of science for adults," Social Science Information XI:1 (February 1972), 113. The research cited here relates to studies by Joseph Trenaman, Communication and Comprehension. London: Longmans, Green and Co., 1967; J. J. Feldman, The Dissemination of Health Information. Chicago: Aldine, 1966; and Luc Boltanski and Pascale Maldidier, "Carriere scientifique, morale scientifique et vulgarisation," Social Science Information IX:3 (1970), 99.

31. Gilbert Seldes, "Television and Education," Confluence: An International Forum 6:2 (Summer 1957), 175.

32. John Scupham, The Revolution in Communications. New York: Holt, Rinehart and Winston, 1970, 189.

33. Karen Possner, A Comparison of a Week of Television Programming in New York and London, Unpublished paper, School of Journalism, University of Iowa, 1972.

34. Participants in the Eurovision exchanges had access to about 800 hours of programming (531 programs), they consisted of sports (60 percent), international news events (20 to 25 percent), entertainment (8 percent), religious programs (3 to 4 percent). In addition there is a news exchange on a daily basis and a supply of programs made especially for foreign markets (like the German language program, "Guten Tag I" and "Guten Tag II"). Richard Dill, "Export und Import von Fernsehprogrammen," Sprache im Technischen Zeitalter 39/40 (Juli-Dezember 1971), 317.

35. Eric Weil, "Propaganda, Truth and the Mass Media," Confluence: An International Forum 2:1 (March 1953), 78.

36. William Bevan, "The Welfare of Science in an Era of Change, Or, Can Humpty Dumpty get it all together?" Science 176:4038 (2 June 1972), 994.

37. John Dewey as quoted in Joseph Ratner (ed.), Intelligence in the Modern World: John Dewey's Philosophy. New York: Random House, 1939, 389/90.

38. John Dewey describes the process: "What nutrition and reproduction are to physiological life, education is to social life. This education consists primarily in transmission through communication. Communication is a process of sharing experience till it becomes a common possession." Democracy and Education, Free Press Paperback, New York and London: Collier-Macmillan Limited, 1944, 9.

39. See: Harold A. Innis, The Bias of Communication. Toronto: University of Toronto Press, 1951; Harold A. Innis, Empire and Communications. Revised edition; Toronto: University of Toronto Press, 1972; Marshall McLuhan, Understanding Media: The Extensions of Man, Signet Books. New York: The New American Library, Inc., 1964.

    The reader should consult James W. Carey, "Harold Adams Innis and Marshall McLuhan," in McLuhan: Pro and Con, ed. by Raymond Rosenthal, Pelican Books. Baltimore: Penguin Books Inc., 1968, 270-308, for a comparison of the two authors.

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40. For a brief survey of media effects literature, the reader should consult Denis McQuail, Towards a Sociology of Mass Communications. London: Collier-Macmillan Limited, 1969, 44-49.

41. John Dewey, Art as Experience, Capricorn Books. New York: G. P. Putnam's Sons, 1934, 197.

42. Harry Skornia explains: "A child normally begins to watch television long before he can either read or attend school. Through his school years, the average student spends far more time per year (about 1,200 hours) with television than in classes. This situation is even more pronounced in pre-school

and post-school years. So it would be strange if television's influence were not one of the most powerful forces, educational or anti-educational, which shapes young lives." Television and Society, New York: McGraw-Hill Book Company, 1965, 157.

43. McQuail, 48.

44. Skornia writes: "A great deal of the current difficulty which the broadcast industry has brought into being is traceable to its 'mass' concept. Technically, immediate feedback provision could have been built into the United States broadcast system from the outset. It would have cost more, and it would have reduced the channels for the one-way flow we now know as broadcasting. But it was possible," 15.

45. Hoover v. Intercity Radio Co., Inc., 286 F. 1003 (D.C. Cir.), February 5, 1923.

46. In the Red Lion case, Justice Byron White, writing for the court, argued that the broadcast spectrum is the property of the people of the nation and continued: ". . . as far as the First Amendment is concerned those who are licensed stand no better than those to whom licenses are refused. A license permits broadcasting, but the licensee has no constitutional right to be the one who holds the license or to monopolize a radio frequency to the exclusion of his fellow citizens. There is nothing in the First Amendment which prevents the Government from requiring a licensee to share his frequency with others and to conduct himself as a proxy or fiduciary with obligations to present those views and voices which are representative of his community and which would otherwise, by necessity, be barred from the airwaves." Red Lion Broadcasting Co. v. Federal Communications Commission, 395 U.S. 367 (1969).

47. Thomas I. Emerson, The System of Freedom of Expression, Vintage Books. New York: Random House, 1970, 655-656.

48. The general source for information in this section is Donald M. Gillmor and Jerome A. Barron, Mass Communication Law: Cases and Comment. St. Paul: West Publishing Co., 1969, and Gillmor and Barron, 1971 Supplement to Mass Communication Law. St. Paul: West Publishing Co., 1971.

49. Categories required by the blue book were: "(1) sustaining programs (unsponsored non-commercial public interest programming), (2) local live programming, (3) programs devoted to the discussion of public issues and (4) [elimination of] advertising excesses." Gillmor and Barron, Law, 664.

The revised categories of the 1960 "Program Policy Statement" were more specific, listing: "(1) Opportunity for Local Self-Expression, (2) The Development and Use of Local Talent, (3) Programs for Children, (4) Religious Programs, (5) Educational Programs, (6) Public Affairs Programs, (7) Editorializing by Licensees, (8) Political Broadcasts, (9) Agricultural Programs, (10) News Programs, (11) Weather and Market Reports, (12) Sports Programs, (13) Service to Minority Groups, (14) Entertainment Programming," ibid., 667.

50. Ibid., 667-668.

51. Ibid., 668.

52. Skornia charges: "All the weaknesses of the FCC are traceable to the act which created it, or to subsequent amendments. Built into both are safeguards engineered by a powerful, pressure-group industry, and jealous provisions on the part of Congress reserving for itself, against the power of the President, the final decisions regarding what is to happen in broadcasting. Many congressmen see the FCC as an arm of the Congress in the constant seesaw of power between the executive and legislative branches of government; they have no difficulty in frustrating FCC efforts directed against friends or benefactors of the Congress or congressmen," 81.

53. For support of this charge, the reader is referred to: Bryce W. Rucker, The First Freedom. Carbondale: Southern Illinois University Press, 1968; Herbert I. Schiller, Mass Communications and American Empire. New York: Augustus M. Kelley, 1969.

54. Rucker, 183.

In reference to the CBS testimony, Skornia writes: "Congressmen listening took this as a promise that CBS would continue to provide education with the facilities it needed. The less than 5 per cent of CBS time which is now devoted to bona fide noncommercial educational programs and granted to educational institutions indicates how well a promise which helped prevent education from getting its own allocations has been kept," 62.

55. Richard B. Hull, "A Note on the History Behind ETV," in Educational Television: The Next Ten Years. Stanford: The Institute for Communication Research, 1962, 338.

56. As quoted in Frank J. Kahn,(ed.), Documents of American Broadcasting. New York: Appleton-Century-Crofts, 1968, 560.

57. Ibid., 562.

58. Schiller, 27.

59. Ibid., 28.

60. Rucker, 187.

61. Karl W. Deutsch, The Nerves of Government: Models of Political Communication and Control, Free Press Paperbacks. New York and London: Collier-Macmillan Limited, 1966, 26-27.

62. Karl R. Popper, Conjectures and Refutations: The Growth of Scientific Knowledge, Torchbooks. New York: Harper & Row, Publishers, 1965, 5.

63. Peter L. Berger and Thomas Luckmann, The Social Construction of Reality: A Treatise in the Sociology of Knowledge, Anchor Books. Garden City, N.Y.: Doubleday & Company, Inc., 1966, 112.

64. Habermas, 52.

65. Herbert J. Muller, The Children of Frankenstein: A Primer on Modern Technology and Human Values, Midland Books. Bloomington: Indiana University Press, 1970, 412.

66. Ronald G. Havelock, Planning for Innovation Through Dissemination and Utilization of Knowledge. Second printing; Ann Arbor: Center for Research on Utilization of Scientific Knowledge, Institute for Social Research, University of Michigan, 1971, 9-40.

67. Sloan Commission on Cable Communications, On the Cable: The Television of Abundance. New York: McGraw-Hill Book Company, 1971.

68. Ibid., 153.

69. Ibid., 152.

APPENDICES

APPENDIX A

British Utilization of Educational Television: A Discussion of the Open University

by

John L. Huffman

The term "educational television" is a generic simplification which serves to bring together a vast array of singular approaches to the utilization of the visual broadcast medium under one general heading. The foregoing is true in America because of the generally decentralized nature of educational broadcasting endeavors, but it is even more true in Great Britain because of the highly diverse and intricately structured, sometimes interrelated efforts to utilize the medium of television for educational purposes, all subsumed under the common rubric of educational television. Thus, when the term "educational television" is used, its referent might be anything falling between the polar extremes of a small college production viewed on a closed-circuit network by a handful of students and a high-budget documentary aired on BBC and viewed by hundreds of thousands. Among the gradations on this polar scale would be the airing of educational programs from a central regional ETV center to selected schools within its area, independent television broadcasts in the vein of "adult education" (sometimes called "further education" in Great Britain), ITV broadcasts tied specifically to

selected college courses, BBC broadcasts in further education, BBC broadcasts in conjunction with certain college or university courses and BBC and ITV commentaries focusing on questions of national interest and aired in prime time, to name just some of the uses to which the medium of television has been put under the general classification of educational television.

This paper will explore some of the facets of educational television in Great Britain. This exploration is necessary to provide an introduction to the educational climate out of which sprang a unique concept in educational television utilization, the Open University. The concepts, structure, and implications of the Open University will be dealt with in the latter portion of the paper.

Educational Needs in Great Britain

Great Britain is now facing many of the identical educational problems that currently beset the other western, industrialized nations. The rise in the standard of living since the Second World War has been accompanied by a large increase in population. This translates into an ever-increasing number of students entering the nation's already overcrowed schools. According to some estimates, the number of school age children in Great Britain will double in the period from 1970 to 1980.[1] It is also estimated that children in the age group 16-17 will number 1,728,000 in 1980.[2] Based on these projections, many British educators have taken the position that the teacher-pupil *modus* of education, which now forms

the backbone of the British educational system, will no longer be possible because of a shortage of both teachers and facilities sufficient to meet the increased needs.

At the university level, the effect of a great influx of students is already being felt. In the decade from 1958 to 1968, the number of students in British universities nearly doubled, from 103,000 to 205,000.[3] The increasing number of university applicants is a result not only of the population increase, but also of the gradual disappearance of the traditional "elitist" concept of higher education in Great Britain. In earlier times this elitist concept served to keep the aspirations of the lower economic classes in line with their ancestral stations in life.

In trying to provide facilities for the burgeoning number of university students, Britain has made great strides in enlarging her system of higher education. From 1958 to 1968, the number of universities in Great Britain doubled.[4] During this decade seven new universities were founded in England and two in Scotland. In addition, ten colleges of advanced technology were raised to the status of universities. When educational administrators projected that even these measures were going to fall short of adequately providing for the influx of students, even more drastic measures were undertaken. In 1964, the Committee for National Academic Awards was created. The Committee was empowered by the government to grant degrees by means of accreditation of selected courses in non-university institutions. The completion of these courses qualified students for the award of a CNAA degree.

Financial Structure of British Higher Education

British education is almost totally supported by government funds released by Parliament. It is estimated that seventy per cent of the operating expenses and ninety per cent of the capital expenditures of universities are met with direct government grants. This is not to say, however, that the state exercises any kind of direct control over the universities.

The funds released by Parliament are controlled by the government Department of Education and Science.[5] The DES is divided into two sectors. The first of these is the University Sector. Its funds are allocated by a non-governmental, independent body called the University Grants Committee (UGC). The UGC is composed of senior university teachers and university representatives empowered to encourage or prevent expansion in university departments requiring additional staff, plant, or equipment and to set and enforce building standards.

The second sector of the Department of Education and Science is concerned with non-university educational institutions. In this sector the control and finance of all colleges and schools are shared with Local Educational Authorities (LEA's) which build, staff, and equip the institutions.

Once a particular university receives a grant from the UGC, it then has complete control of the funds and is responsible for its own internal allocation. It should be noted that these funds have no relationship to salary funds for university teachers. The

salaries of all teachers are nationally negotiated by teacher's unions and do not fall under the purview of the University Grants Committee.

In summary, then, the financial structure of British education is controlled almost entirely from within by educators, but at the same time it is almost entirely dependent for funds upon the proclivities of the government, which may or may not see fit to honor the requests of the British educators.

Thus, the prevailing mood in British education during the 1960's was one of anxiety coupled with almost frenetic activity as educators and administrators tried desperately to conceive of possible ways to handle ever-increasing numbers of students with limited financial resources.

British Educational Television

In light of the increased demands on the British educational system and in light of the great strides made in television technology during the same period, it comes as no surprise that British educators turned to a marriage between education and the medium of television as an obvious and viable solution to these problems. In general the educators have turned to three existing facets of British television in their attempt to utilize this medium. They are: closed-circuit television (CCT); the national government controlled channels administered by the British Broadcasting Corporation (BBC); and the channel controlled by the Independent Television Authority (ITA). The argument has been

voiced that closed-circuit television should not be included under the general classification of educational television because it is not a broadcast medium in the strict sense of the word, instead depending on direct wiring between reception points and transmission points rather than utilizing the airwaves. This argument was originally voiced when CCT was in its infancy and consisted largely of facilities restricted to a single building or, in many cases, to a single department or room. This particular concept of CCT is no longer valid, as will be pointed out later. Some CCT networks are now so widespread that they approach in terms of audience numbers some of the commercial ITV stations. In addition, to rule out the discussion of CCT when talking about British educational television would be to ignore the greatest single solution British educators have found so far to the problem of overcrowded schools. Finally, it seems an impossible task to separate conceptually CCT from broadcast television in terms of goals in education, in terms of methods utilized to attain these goals, and in terms of the effects each has on its audience. Thus, closed-circuit television can be considered not only as an important factor in educational television, but also, at least in some areas of the British educational system, as the most important element.

Closed-Circuit Television. Any discussion of closed-circuit television in Great Britain must include the activities of the National Educational Closed Circuit Television Association (NECCTA). NECCTA formally came into existence in 1967 as an outgrowth of

informal meetings that had been held in previous years by directors of various educational television systems. Today it is the main organization responsible for bringing together educational organizations that systematically use closed-circuit television facilities as part of their educational program.

NECCTA claims a membership of over 160 institutions across Great Britain. Represented on its National Executive Committee are agencies such as the BBC, ITA, and the National Council for Educational Technology. To be eligible for full membership, NECCTA requires that an institution be systematically using closed-circuit television in a comprehensive manner, as opposed to limited usage for departmental or research purposes. NECCTA provides an associate membership for institutions planning a comprehensive CCT program.

The stated aims of NECCTA are to establish appropriate educational standards and technical standards for education television, to promote further research, to further liaison efforts between the users and producers of television at various levels, to act as a forum for the exchange of information on staffing, training, operating techniques, technical development, and program content, and to act as a representative body for closed-circuit television users.

The extent to which closed-circuit television has permeated the educational system of Great Britain can be seen at the University of Leeds, which was among the first British universities to set up a full operational central television service staffed by professionals. CCT is used at Leeds as both a visual aid for lectures and research and as a teaching aid per se. Specifically, the closed-

circuit television facilities at Leeds are used in teaching mathematics, medicine, metallurgy, civil engineering, English, education, Chinese studies, electronic engineering, philosophy, fine arts, Russian studies, physics, and chemistry.[7] Exposure to CCT educational methods is an integral part of every student's matriculation at Leeds. The pattern of closed-circuit television utilization at the Univeristy of Leeds is not unique; similar patterns have been developed at almost all British universities.

An important characteristic to note about these closed-circuit television users is that they do not exist in isolation. In the city of Glasgow, all primary and secondary schools, colleges, and universities are linked to a central ETV Center.[8] All of Glasgow's 50 secondary schools are linked to the Center with a minimum of two receivers. Like most other educational institutions utilizing CCT, the schools can use either the ETV signal or a BBC/ITV signal. Panels of Glasgow teachers form the nucleus or program preparation groups. They are guided by short courses in TV production and are assisted by professional scriptwriters, producers, and directors.

In London, as in Glasgow, all educational establishments are linked to an educational television center. The links are provided and maintained by the Post Office, and currently six channels are in use. The educational possibilities inherent in a network such as London's can be gathered by noting the extent of the network. The Center is linked to 887 primary schools, 239 secondary

schools, 66 special schools, 13 colleges of further education, 5 schools of art, 32 technical schools and colleges of commerce, and 9 colleges of education. All of these links are under the direction of the Inner London Education Authority.

Action is now being taken to link together the various regional closed-circuit television centers. In the foreseeable future a vast network of closed-circuit television centers will cover all of Great Britain. This network will allow almost unlimited sharing of ideas and programs among Britain's educational institutions.

It is quite obvious that British educators have made a definite commitment to closed-circuit television as one answer to the problems of limited financial and educational resources. This particular solution is not applicable to all of the problems, however. Further solutions can be found in the composition of the programming of national television.

National Educational Television. In Britain the airwaves are controlled by the General Post Office, which in this particular function resembles its American counterpart, the Federal Communications Commission. The Postmaster General has regulatory powers over the airwaves, this power having been vested in him by the Wireless and Telegraph Acts.

Both the British Broadcasting Corporation and the Independent Television Authority operate under a royal charter administered by the Post Office, and both charters are subject to periodic review.

As John Stonehouse of the BBC has noted: "The year 1976, in fact, provides a watershed as both the British Broadcasting Corporation Charter and the Independent Television Authority lapse on 31 July in that year. There will certainly be a great deal of debate about how sound and television broadcasting should be organized after 1976."[10]

Thus, both national networks, BBC and ITA, are controlled by similar bodies which are both ultimately responsible to Parliament. Neither the BBC Board of Governors nor the ITA Board are composed of broadcasters; the membership of these bodies represents the public in controlling the broadcasters as regards programming, and the bodies are themselves answerable to Parliament for their actions.

It is a popular misconception outside of Britain to consider the BBC network as the "government" network, and to consider the ITA network as the independent network similar to its American counterparts. In reality, the degree of accountability to the government is equal in both cases. The major difference in the two networks is in their methods of financing. The BBC network is financed by the licensing of television receivers; every member of the public who desires to avail himself of the programming broadcast by the BBC must purchase a license. On the other hand, the ITA is financed by advertising in the same manner as the American television networks.

Under the terms of the BBC Charter, education is one of the major duties of the BBC. As to how it is to go about performing this

duty, the Charter is of necessity quite vague. Richmond Postgate, the Controller of Educational Broadcasting for the BBC, explains how the BBC goes about determining its duties in the following ways:

> In making the provision (of including educational material in broadcasting), the BBC is in the main self-advising, but receives outside advice, comment and guidance from its advisory bodies--nationally, the General Advisory Council; for Scotland and Wales from the respective national broadcasting council; and for the BBC Regions in England, from regional advisory councils.[11]

The School Broadcasting Council, a part of the General Advisory Council, utilizes a staff of Education Officers and Program Sub-committees to discover the needs of teachers and pupils in schools, and then gives guidance to the BBC on the ways in which broadcasting can be used to further the educational goals of the schools. Members of the School Broadcasting Council are themselves representatives from the educational world, and thus are well suited to the task of formulating school broadcasting policy.

An additional advisory body to the BBC is the Further Educational Advisory Council. This, again, is a national body which, advised by representative committees, commissions programs to be used for adult education.

The BBC is involved essentially in four distinct modes of educational broadcasting: school radio, school television,

further education (FE) radio and FE television. The first two modes have as their programming content actual academic courses designed with the teacher as a central, pivotal force. Many of these courses operate in conjunction with home study aids and prepare the student for a test to be taken at some educational institution. The second two modes are usually more vocational than academic in programming content, and many times have as their goal the ephemeral purpose of "cultural enrichment."

Like the BBC, the ITA has a statutory duty of education under its Royal Charter, along with the duties of informing and entertaining its audience that it shares with the BBC. Again like the BBC, ITA is advised by professional committees. The Educational Advisory Council is the main advisory body. The Council is assisted by two program committees, a Schools Committee and an Adult Education Committee. It is interesting to note that the Chairman of the Adult Education Committee for the ITA is also Chairman of the BBC's Further Education Advisory Council. This reflects a deliberate attempt on the part of both broadcasting authorities to avoid program clash or unnecessary duplication in the educational broadcasting field.

Summary

It is hoped that this brief picture of the educational television milieu in Great Britain has given the reader some insight into

the general position that educational television now holds in the British education system. It has been pointed out that the term "educational television" is a convenient catch-all heading under which a multitude of diverse activities are carried out. Some of the problems which now affect Britain's educational system have been described, the most important of these being the vast influx of students into Britain's schools.

A brief look has been provided at the responses the British educational system has made in meeting these problems: an increasing utilization of closed-circuit television to relieve teachers of some of their burdens and an increasing reliance on national television to play a larger role in the educational process.

The Open University: Introduction

Out of this educational climate in Great Britain has sprung forth an entirely new concept in the world of higher education--a "university of the air." Maligned by some and praised by others, the least that can be said about Britain's Open University is that it represents a bold new experiment in university schooling; an experiment that, if successful, has momentous implications for university-level schooling throughout the world. The balance of this paper will examine the operation of the Open University.

Historical Background of the Open University

While the educational climate from which the Open University sprang has already been noted, the exact impetus for its genesis remains somewhat obscure. The Open University itself traces its beginnings to a Government Advisory Committee which was set up in 1965 to look into the responsiblilities of such an institution.[12] In a White Paper "University of the Air" (Cmnd 2922, HMSO 1966), the Government accepted the recommendation of the committee that such an institution should be established.

The London Times, in its penchant for exactitude, traces the birth of the concept of the Open University to ". . . one day in 1963 by Mr. Harold Wilson speaking in Glasgow . . . . "[13]

In the April 29, 1972, issue of Saturday Review, Dr. Peter J. Smith, a faculty member of the Open University, presents a more comprehensive view of the birth of the Open University. He sees the impetus for the concept of the University originating in the Robbins Report (1962) on the state of British education. Smith voiced the opinion that the Robbins Report "set the tone for the destruction of elitism by proposing that places in higher education be limited not by some arbitrary decision but solely by the number of students able and willing to benefit from the system."[14] According to Smith the Robbins Report, if true, was a subtle indictment of the past. Smith explains this hypothesis in the following way:

> If it is true that a higher proportion of the relevant age group is now capable of benefiting

> from higher education, it follows that many adults must have been deprived of a university education for no other reason than insufficient places. In numerical terms it has been estimated that more than a million additional people would have been qualified for higher education had the Robbins proposal been applied thirty years earlier--a not insignificant proportion of a population of only a little more than fifty million. It was to this "forgotten million" that planners of the Open University directed their attention; it was they who prompted Lord Ritchie Calder to dub the Open University the "university of the second chance."[15]

Smith also credits a fortuitous political event for precipitating the genesis of the Open University--the termination of thirteen years of Conservative government rule and the ascendancy of the Labour government in 1964. According to Smith, Prime Minister Wilson seized upon the concept of the University of the Air as a progressive symbol of the new government, thereby ensuring the fruition of the project.

In the literature concerning the history of the Open University, much credit is also given to Lady Lee, the Minister of Arts in the new administration.[16] According to these reports, Lady Lee championed the cause of the Open University with such vigor that it was virtually an unkillable project when the Labour government fell in June of 1970.

Purpose of the Open University

The purpose of the Open University, while perhaps quite clear to its supporters, was not quite so clear to its detractors. During the formative years of the University, a controversy quite foreign to the usual university environment developed concerning the utility of such an institution of higher learning. Something of the general feeling of those who questioned the concept of the Open University can be gained by studying the leading article of the London Times of Friday, August 14, 1970. The editorial begins by quoting Lord Crowther's definition of the purpose of the Open University: to offer another chance to those who "drop out through failures in the system, through disadvantages of their environment, through mistakes of their own judgment, through sheer bad luck."[17] The Times then goes on to take the administrators of the University to task for accepting applicants who were "overwhelmingly middle-class."[18] This criticism will be taken up in greater depth later in this paper.

It is the next criticism of the University that the Times voices that is the most important one, for it represents probably the largest obstacle that the Open University must overcome if it is to ever gain equal status with Britain's other universities.

The issue, stated simply, is the following: Is an institution that violates almost every traditional method in instructing its students and awarding its degrees able to produce the same

quality of students graduated by the more traditional institutions? The answer of the Times, at least in the following instance, would seem to be a negative one:

> Even assuming the worthwhileness of the enterprise, there is still some room for anxiety about the academic aspects of the Open University. The information that the Humanities course is designed 'for all students who are interested in man, his history and his cultural achievements'--which university student is not?--is an ominous preface to a course which seems to try hard to find the most appealing combinations of triviality and fragmentation--a nibble at Vasari, a chunk of Descartes, a bite at St. Mark's Gospel. A liberal university education as we know it demands direct personal contacts between teachers and learners and even more, among the students themselves. It is doubtful that the network of summer schools and study centres will be able to support it.[19]

While there are at least two distinct and not necessarily related criticisms in the foregoing quotation, the questions that are posed are, on the whole valid ones, and they must eventually be answered.

In the remainder of the editorial under study, the Times appears to be relegating to the Open University a purpose that the designers of the University did not aspire to. As to whether or

not the "elitism" to which Professor Smith addressed himself no longer exists in the British system of higher education, the reader may be his own judge.

> It is in its copying of the traditional in university education that the Open University has best succeeded in embodying the egalitarian aspirations with which it originated. There will be no room for feelings of inferiority in a university which specifically envokes the example of Oxford and Cambridge in making all its first degrees B.A.'s, which devotes so much effort to contriving opportunities for student participation, and which has even sought and obtained the power of awarding a degree honoris causa. (It is known as the D. Univ. and might have been invented with Dr. Faustus in mind.)
>
> The effect of all these trappings may perhaps be to distract the staff from the serious business at hand--the provision of basic educational assistance, mainly vocational in character, for those who wish to study at home. More serious still, they may make it more difficult for the Open University to play its part in a coordinated structure of home-based further education.[20]

The "vocational character" which the editorialist ascribed to the Open University is quite different from the character which the proponents of the Open University would see it possessing.

The calling into question of the Open University's purpose by the Times is not an isolated incident. Many articles about the University echo the question posed by Stephen Jessel as to "whether its function has ever been satisfactorily defined and if so whether the university is likely to fulfill it."[21]

The supporters of the Open University feel that its purpose is nowhere near so obfuscated. Harold Wilson envisaged it in 1963 as a means for technicians and technologists who left school at an early age, those in clerical occupations, and housewives to obtain a university education.[22] Smith sees it as the most viable means to save the "forgotten million" from the fate of no educational opporunity at all.[23] British educator Dr. Michael Young views the University as a "second chance institution for people who have had a first chance and for one reason or another failed to take advantage of it."[24]

Beyond providing a second chance, proponents of the Open University see it as a solution to the problem of how to provide a university education for the increasing numbers of students who otherwise will have to be turned away because of a lack of facilities and teachers. As Dr. Young points out, "The resources devoted to education cannot possibly grow in step (with the population). One half of the nation cannot be fully engaged in teaching the other half."[25]

Operation of the Open University

When the first students began work at the Open University in January of 1971,[26] the educational system that they faced was the prototype of an integrated system of home-based, universtiy-standard education. The typical student, in compliance with the general aims of the university, was postulated as being over 21 and already holding a full-time job. The requirements for his entrance into the Open University system were comparatively simple: there should have been compelling reasons for the student's inability to obtain an education at some other university, he must have had access to BBC2 television and VHF radio, he must have lived within driving distance of one of the Study Centres, he must have been able to spend seven days of the summer at a selected university for an intensive studying program, and he must throughout the duration of his study demonstrate the ability to meet Open University standards, studying mainly at home in his spare time. The student needed no "A" level, "O" level, or any other formal academic qualification for entry into the Open University. His place in the University system was allocated by a quota system based on student demand, Open University capablilites, regional balance of students, and numbers of applicants in each occupational group.

The heart of the Open University is located on a small campus in Milton Keynes, a new town located in Buckinghamshire about fifty miles north of London. There the central staff of

about 200 is divided into six faculties (science, social science, humanities, technology, educational studies, and mathematics) which design the individual courses and the overall learning system, write the student self-instruction and assignment material, design in conjunction with the BBC the television and radio programs that are a major portion of the student's program, and carry out a range of activities similar to other university administrations.

The BBC does not, as is many times believed by those not familiar with the University, run the Open University. However, the University does operate in partnership with the BBC, and the broadcast elements of the courses are transmitted as part of the BBC's national radio and television services under the terms of its charter duties described earlier. Members of the BBC staff are full-time members of the University's faculty course teams. The BBC also receives financial remuneration for the part it plays in the Open University administration; the OU-BBC partnership "is based on an understanding under which the BBC is reimbursed for production of television and radio programs."[27]

To implement its stated aim of providing "the opportunity of obtaining a degree comparable in standard to degrees awarded at other universities in Britain, to adults who can undertake systematic part-time study,"[28] the Open University uses a "multi-media approach." The elements of this approach are: television and radio broadcasts transmitted on BBC2 during 5:30 to 7:30 on weekdays and on Sunday morning; written material programmed for

self-instruction; student assignments graded by a system of computers and regionally located, part-time tutors; a national network of part-time counsellors available to meet students in local study centers, to hold discussion groups, and to give advice on general study problems; and residential summer schools, which are compulsory for all students. None of these elements is totally new to the academic scene. However, as professor Smith has noted, "But what is certainly new is the combination of components into an overall system, the scale of both the components and the system runs smoothly and--lest it be thought that the system is potentially impersonal--humanely."[29] It is probably safe to say that nowhere else in the world does there presently exist a comparable institution comprised of similar elements dedicated to the same comprehensive goals.

Degrees. The Open University is currently concentrating its academic activities mainly on work leading to its first degree--Bachelor of Arts--awarded on the basis of credits for the successful completion of courses. The BA degree is awarded to students who obtain credits in six courses, and the BA (Honors) degree, which is classified 1st class, 2nd class, or 3rd class, is awarded for two additional course credits, a total of eight credits. The name of the degree is the same whether the student is studying an arts-based or science-based course. Course credits for the award of the degree may be spread over any number of years.

For recent graduates wishing to pursue full-time studies there are facilities provided on the main Open University campus. Degrees are awarded upon the completion of assigned course work and a dissertation or thesis. The higher degrees available are Bachelor of Philosophy (B. Phil), Master of Philosophy (M. Phil), and Doctor of Philosophy (Ph.D.).

Course Structure. Courses at the Open University are based on the calendar year and are provided at four years of academic study. The first level course in each faculty is known as the foundation year. Foundation courses are provided in the six areas listed previously. An adjunct to the central University administration known as the Institute of Educational Technology assists course development in all disciplines and conducts allied research.

In any one year students may take either one or two full-credit courses. One credit is given on the successful completion of each course. In 1972 the faculites of Arts, Mathematics, Science, and Social Sciences each offered a choice of at least two second-level courses. Some of these were half length leading to a half credit, thus giving students a greater freedom of choice in planning their programs of study. Students choosing these half credit courses were required to take at least two of these during the year.

Credits must be obtained in two foundation courses before students can proceed further in their degree program. The ordinary

degree is awarded if the student obtains credits in two foundation courses and four courses at the second or subsequent levels. These four can be at second level, three at second level and one at third, or two at second level, one at third and one at fourth levels. The honors degree is awarded if the student obtains credits in two foundation courses and six full credits at second or subsequent levels, provided that at least two of these are at third or fourth level. Second or subsequent level courses usually have prerequisite courses exisiting at the first level. Certain students are allowed credit exemptions if they possess qualifications from other institutions.

As can be gathered from the preceding information, the minimum period needed to complete the six full course credits for the BA degree at the Open University is three years, and for the BA (Honors) degree, four years.

Teaching Methods and Course Material. As noted previously, the teaching methods of the Open University combine three main elements: broadcasts on television and radio transmitted by the BBC; correspondence work; and a summer school. The work of each foundation course is divided into units of one week over a 36-week schedule. Each weekly unit contains a television broadcast, a radio broadcast, and correspondence work. Subsequent level courses may have fewer assigned broadcasts.

Open University television programs are shown on BBC2 and the radio broadcasts are on VHF Radio 3 or VHF Radio 4. The television

broadcasts are considered an essential part of the student's program. Usually the content of the broadcasts is closely linked with the written correspondence material, and many times questions on the broadcasts are included in the "assessment material" (tests) of the students. An effort is made to stay away from the canned television lecture approach, and an attempt is made to utilize television's unique capabilities as a visual medium. Professor Michael Pentz, the dean and director of science at the Open University, explains how he uses the medium in the following way: "Teaching on TV is a skill, and we're a little less amateur than others. We try to exploit the fact that both TV and science have to do with things that move, processes." Professor Pentz goes on to develop what seems to be the underlying philosophy of all OU broadcasts: "It seemed crazy to project on a TV screen something that could be shown in a still photo or diagram. Still more useless to have some bod gassing. So we went after demonstrations, timelapse photos, electronic microscope pictures."[30] In general, then, broadcasts do not duplicate material in correspondence texts. Many times the author of a unit will appear on a broadcast to explain a part of the week's work in more detail, and often a recognized authority in the field under study will appear on a program to offer his perspective on the subject. The times and subject contents of all programs are sent to the students before the courses begin.

The radio broadcasts serve a purpose that is somewhat conceptually different from the purpose of the TV broadcasts. While the TV programs are tied directly to the course work, the radio programs are structured as more of a subject enrichment type of presentation. They deal with peripheral aspects of the subject under study, and many times explore implications that are uncovered in the main body of course work. While students are not required to listen to these broadcasts, the greatest majority of them--over 85%--do listen.[31]

At regular intervals throughout the course, students receive a package of specially written course materials. In each of these packages is included a 40 to 80 page booklet which forms the core of a single week's work. In addition the correspondence packages include notes on the radio and television programs for that week; some weekly units also contain records, film strips, and articles reprinted from journals and other material. Between two and five weeks' work is included in each package.

If the course material warrants it, students also receive home laboratory kits. For example, Science and Technology students receive complete home experimental kits. In Science the foundation course kit includes chemicals, glassware, and a microscope developed especially for the University, in addition to numerous other items. The technology kit includes a small binary computer, a noise meter, and a tape recorder. The cost to students using one of these kits is a returnable deposit.

The majority of correspondence packages contain an assignment requiring written work to be submitted. This is sent to a course tutor for marking, usually the same tutor the student meets from time to time in a study center. The tutor returns the marked work to the University, and comments and marks are recorded before the assignment is returned to the student. A number of these assignments are designed to be graded by computer.

The marks received on assignments are recorded and the best are used as part of the final assessment of a student's performance. Each course is terminated by a three-hour final examination held under supervision at a preselected site sometime in October or November. A number of self-assessment tests are included in the correspondence packages to give the student some indication of his progress.

Regional Structure. The territory covered by the Open University--England, Wales, Scotland, and Ireland--has been divided into 12 separate regions, each headed by its own regional director. Existing within each of these regions is a subsystem of local study centers, usually located at a local college or educational center. It is at these local study centers that the student can talk with his assigned counsellor and tutor. At the study center, the following facilities are usually provided: study rooms; a VHF radio for students who prefer to listen to broadcasts as a group or who do not have VHF radio at home; a BBC2 television receiver over which course broadcasts can be viewed

and followed up by group discussions led by a counsellor; a tape replay facility together with a complete library of cassette tapes of the radio programs; a film projector to show cassette film copies of the television programs; and at approximately one hundred strategically located study centers a computer terminal is located for use by mathematics and technology students.

The study centers, which are usually open for evening and weekend study, are staffed by part-time counsellors, class tutors, and correspondence tutors. These are usually teachers in regional institutions of higher education who have been hired by the Open University for their part-time services. Each student is assigned to a counsellor and a class tutor, the same person performing both roles in many cases. In addition, a student has a correspondence tutor to whom he sends written work for comment, marking, and grading. Full-time staff tutors and senior counsellors supervise their part-time colleagues. Senior counsellors organize the local study centers, help train the part-time staff, and assist in running the residential summer schools. Staff tutors are concerned with tutorial arrangements in the regions, and they also advise the Open University course preparation teams on the effectiveness of the courses and the various teaching methods.

Examinations. As mentioned earlier, OU students have an annual examination on each course during the latter part of the year. In 1971, a total of 17,664 examinations were taken in the various subjects. This represents a substantial number of the

19,000 students who were registered during the same year. A total of 16,431 credits were awarded, giving a success rate of 92.5%.[32] While this percentage rate is almost suspiciously high, proponents of the Open University claim that it is a true gauge of success. As Professor Smith puts it:

> The high success rate in credit acquisition leaves no doubt that the overall system works well. It is perhaps pertinent to note that student assignments, summer school work, and examinations were graded on a "criteria-based" system, meaning that grading was to an absolute scale and was not adjusted to a predetermined pass rate. Moreover, a team of external assessors ensured as far as possible that standards were comparable to those in other universities within the British state system.[33]

Examinations are not the only means of assessment used by the University. Continuous assessment is made by tutor-marked and computer-marked assignments. The tutor-marked assignments are generally essay type questions, with the student providing his own answers which are then marked by the correspondence tutor.

The number of tutor-marked assignments varies from course to course. Usually there are about ten per course. The marks of the six best assignments are used in conjunction with the final examination to determine the student's final grade. There exists a monitoring procedure within the system whereby each correspondence tutor's work is checked by a staff tutor to ensure continuity in student evaluation.

Computer-marked assignments are usually of the "objective" multiple-choice type familiar to American students. Again, the number of assignments varies with the course, with thirty-one computer-marked assignments in the science course as opposed to seven in the arts foundation course. The computer that does the grading is programmed to spot warning trends in a student's work, thus bringing to the attention of tutors students who are having serious problems with the course.

Summer Schools. All foundation students are required to attend a one-week summer school. It appears that this is at least one way in which the Open University administrators have attempted to give the students a taste of traditional academic life. These summer schools are held in regional universities, and conventional teaching is provided in the form of lectures, laboratory work, and seminars. Professor Smith enthusiastically describes the summer session:

> In six intensive days of more than fifteen hours each, students were put through a grueling program of laboratory work and seminars that provided the most startling improvement in academic attainment I have ever witnessed. The way in which students with no previous laboratory experience emerged more than ninety hours later with a good grasp of laboratory technique was a quite remarkable phenomenon.[34]

Students who enroll in two foundation courses simultaneously are

required to attend summer school for two weeks. These two weeks are not necessarily consecutive and not necessarily at the same center. Students are excused from summer school attendance only in extremely rare cases.

Student Fees. When compared to the cost of receiving a degree at another British university, the cost to the student at the Open University is minimal. The cost of obtaining six full credits is as follows: a tuition fee of 25 pounds per credit course for a total of 150 pounds; summer school fees for anywhere from a minimum of two weeks to a maximum of nine weeks at a cost of between 50 and 295 pounds; books at a cost of from 10 to 15 pounds per course for a total book fee of between 60 and 90 pounds; and incidental costs such as travel and correspondence. Thus, the average total cost for a degree from the Open University is somewhere around 370 pounds. Costs for each individual course and summer school session must be paid upon enrollment. Open University students are eligible for grants to help defray expenses from their Local Education Authorities, just as are all other university students.[35]

Open University Government. The main executive bodies of the Open University are the Council and the Senate. The Council has as its main duty the administration of the University's finances and business affairs. Its members include representatives from the academic staff, the BBC, local education authorities, and institutions of further and higher education. The Council is

assisted by advisory committees representing different educational interests. Committees exist on adult and higher education, publishing, special education, and there are also liaison committees concerned with local education authorities. As is the case when a new university comes into existence in Britain, an Academic Advisory Council, appointed by the Privy Council, exists to ensure that proper academic standards are maintained.

The Senate is charged with the responsibility for all academic work. It directs the teaching and controls all matters connected with examinations and degree awards. Its members include the academic staff, ex-officio members, and appointed members.

Part-time staff and students are involved in the government of the University through a consultative committee structure. There are consultative committees in each local study center, and they elect members to a Regional Consultative Committee. These in turn report to a Central Consultative Committee, which includes representatives from both full-time and part-time regional staffs, the central academic staff, and students from the regional committees. The Central Consultative Committee makes recommendations and suggestions to the main bodies of the University.

The Open University is financed by direct grants from the Department of Education and Science and does not receive financial aid from the University Grants Committee, the operation of which was described in the first section of this paper. Grants received during the 1970-71 year included a 4 million pound grant for

operational expenses and another 1.8 million pound grant for capital expenditure. The student fees mentioned previously also contribute to the operational budget of the University. Additional income is derived from the sale of course materials, both to OU students and to other educational institutions in England and abroad.

Concluding Remarks

This, then, is Britain's Open University: a highly complex, highly structured, wholely unique kind of institution of higher learning that evolved out of particular educational climate and a particular set of educational needs in Great Britain.

Critics of the Open University point out, perhaps correctly, that it is not operating totally within the boundaries it set for itself as the "university of the second chance." An analysis of Open University admissions by occupation group for 1970[36] shows that teachers are by far the largest occupational group enrolled as students in the University. Over 34% of the Open University's student body were themselves teachers. The next highest occupational group in the OU student body is that of the professions and the arts, again decidedly not a "lower" class of the British social structure. A similar analysis of Open University place allocations for 1971 shows that figures remained approximately the same.[37] Open University officials are very much aware of this criticism, but point out that many teachers earn

less than skilled workers in Britain and that teachers are under heavy pressure to get university degrees to qualify for higher rank and pay. Officials also point out that in terms of number of applicants as opposed to actual places allocated, members of the working class receive a much higher proportionate share of the places than do the so-called middle class applicants.

Regardless of whether the Open University is serving its originally stated purpose or not, it still must be viewed as an experiment on a large scale, and one that will have implications far beyond the comparatively minor question of whether or not it is serving its proper audience. The more important question is this: how is it serving its present audience?

How is the ultimate success of the Open University to be judged? At the risk of providing a simplistic answer to a highly complex question, it would seem that the Open University must be judged by the same criteria that are applied in gauging the success of other universities--the ability of the institution to fully prepare its graduates for their chosen roles in society. Some of the proponents of the Open University seem to be abdicating on the need of the Open University to respond to these criteria. Professor Pentz says:

> I think we're going to turn out a different kind of graduate, the kind that other universities will get around to producing in about 20 years, the kind who will develop slightly different skills--

versatility, adaptability, the capacity to learn rapidly.[38]

While the characteristics cited by Professor Pentz are highly desirable by-products of an educational system, they are not in themselves raison d' être for a university in 20th Century society. A university must also pass on to its students the knowledge that is necessary for them to function proficiently in their chosen fields of endeavor. If a university fails to perform this function, then its graduates are not yet ready to enter society as educated members of their chosen professions. It is on this aspect of its educational performance that the Open University must ultimately be judged.

There is one important factor that must be taken into account when this assessement of the Open University is made, a factor that has yet to be mentioned. This factor is cost effectiveness. The cost of producing a graduate of the Open University is about 20 per cent the cost of producing a conventional university graduate in Great Britain. If the Open University graduate is receiving only 20 per cent or less the education that the conventional university graduate is receiving, then the Open University system is a failure and should be abandoned. However, if the Open University graduate has received anywhere near a comparable education then the system is of extreme value and has worldwide application.

The Open Univeristy system and the conventional system are both means to an identical goal--the education of students so that they can take the most productive roles that they are capable of taking in British society. The virtues of the Open Universi:y system as compared to the conventional system are impressive: it functions in the "real world" environment of the student rather than the artificial, cloistered environment that academia normally functions in; it has the potential of almost total access to those who wish to utilize it, while the conventional system must by its very nature be closed to the majority of the population; and, closely allied to the preceding point, the Open University system is by far the more economical system. The question that must be answered--and only time will provide the answer--is that of whether or not the Open University system will do as well or better than the conventional system in providing its graduates with a quality education. An affirmative answer to this question may very well change the structure of higher education throughout the world.

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1. British Broadcasting Corporation, Educational Television and Radio in Britain. London: British Broadcasting Corporation, 1966, 27.

2. Ibid., 28.

3. "British Education," Encyclopedia Americana. 1972, XIII, 286.

4. Ibid.

5. For a more detailed description of the financial structure of the British educational system, see Chaper 2 of Educational Television and Radio in Britain cited above.

6. British Broadcasting Corporation, Educational Television, 88.

7. Ibid., 110.

8. Ibid., 103.

9. Ibid., 110.

10. E. G. Wedell, ed., Structures of Broadcasting Manchester: Manchester University Press, 1970, 2.

11. British Broadcasting Corporation, Educational Television, 56.

12. John Lodge, "Background Notes on Open University" (paper prepared under auspices of Open University for overseas distribution, March 23, 1972), 1.

13. The Times (London), August 1, 1970, 12.

14. Peter J. Smith, "Britain's Open University: Everyman's Classroom," Saturday Review, April 29, 1972, 42.

15. Ibid.

16. See, for instance, Peter Smith's article cited above and The Times of London of August 1, 1970, 12.

17. The Times (London), August 14, 1970, 7.

18. Ibid.

19. Ibid.

20. Ibid.

21. The Times (London), August 1, 1970, 12.

22. Ibid.

23. Peter J. Smith, Saturday Review, 49.

24. The Times (London), January 9, 1971.

25. Ibid.

26. For a report on the agenda of the opening session of the Open University, see The Times (London), January 2, 1971, 2.

27. "The Open University: Breakthrough for Britain?" Science, November 12, 1971, 677.

28. John Lodge, "Background Notes," 1.

29. Peter J. Smith, Saturday Review, 42.

30. Science, 677.

31. Peter J. Smith, Saturday Review, 48.

32. John Lodge, "Background Notes," 7.

33. Peter J. Smith, Saturday Review, 47.

34. Ibid., 49.

35. For an indication that some discrimination against OU students in regard to grants has been practiced by some LEA's see the article concerning grants in The Times (London) of April 15, 1971, 4.

36. John Lodge, "Analysis of Applications and Allocation of Places for 1972 Courses" (paper prepared for distribution by the Department of Information Services of the Open University), 1-25.

37. Ibid.

38. Science, 678.

APPENDIX B

Knowledge Utilization in a Democratic Society:
Education Through Commercial Television

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